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THE INSECT PEST SURVEY
BULLETIN

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR MAY, 1930

The usual spring damage by cutworms is being reported from the greater part of the country. The army-cutworm outbreak in western and central Nebraska continued well into late April. Towards the end of May damage by the pale western cutworm was reported from parts of Montana.

Wireworms were reported as more or less troublesome from practically all parts of the country. In south-central and southern Illinois several thousand acres of corn had to be replanted on account of the depredations of these insects and in parts of South Dakota similar serious damage is being reported.

The recently discovered wireworm Heteroderes laurentii Guer. was reported as pupating in late April and early May, pupation continuing throughout the month.

An epidemic of the flower thrips is reported from Michigan, principally damaging fruit.

The Hessian-fly situation has not changed materially since our last report. Unfavorable weather gave this insect a decided setback in western and central Illinois.

Mormon crickets are appearing in very threatening numbers in Sanders County, Mont., a county in which severe outbreaks occurred in 1926 and 1927.

The corn ear worm is now appearing quite commonly in southern Mississippi and southern and central Texas.

Throughout the East-Central States damage by sod webworms to corn is quite general. Similar damage is also reported from Kentucky, Missouri, and Iowa.

A rather unusual outbreak of the southern corn leaf beetle (Myochrous denticollis Lec.) is reported from Indiana. In one field 90 per cent of the corn was eaten off below the ground by these beetles. Similar damage is being reported from Kentucky.

The pear midge emerged in large numbers in the pear-growing portion of the Hudson River Valley, New York State, and will probably do serious damage where control measures are not applied.

During the early part of May practically all of the mature larvae of the oriental fruit moth pupated and a large percentage of adults had emerged by the middle of the month. Twig injury was observed in western New York during the third week in the month, and toward the end of the month similar injury was appearing in Connecticut. In Maryland the peak of emergence occurred about the 1st of the month. In the Georgia fruit belt the infestation appears to be the lightest since the insect became established in the Fort Valley district, and here it also appeared later than in previous years. In the East-Central States Illinois reported from 40 to 50 per cent of the peach twigs injured by May 10, in Pulaski County. The fruit moth has also been reported as appearing in appreciable numbers in Ohio, Indiana, Michigan, Kentucky, and the northern and north-central parts of Mississippi.

The first plum curculio observed to leave peach drops in the Fort Valley district of Georgia was recorded on April 28, about two weeks later than usual. There will, therefore, probably be very little damage except to late varieties. In the East-Central States, particularly in the southern part, the plum curculio is seriously damaging apples. The stone fruits were practically a failure in this region, which may account for the unusual damage to apples.

The rusty plum aphid was reported as unusually abundant in the Fort Valley district of Georgia and in southern Mississippi. It was also recorded from Nebraska and Utah.

An infestation of the grape phylloxera was discovered in two San Gabriel vineyards in southern California. Every effort is being made to eradicate this insect.

Rather serious infestations of pecans by the pecan nut case bearer were reported from Albany, Ga., and from Stone and Jackson Counties, Miss.

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The situation with regard to citrophilus mealybug in southern California is more favorable than it has been any year since this insect became a major pest in Los Angeles County. Many properties recorded as infested last year are now being reported clean and only a very low percentage of the properties are being reported as heavily infested.

The California red scale is reported as being generally abundant throughout the lower Rio Grande Valley of Texas and present indications are that infestations will be severe.

The vegetable weevil is being reported from several localities in Mississippi, in some cases doing serious damage to tomato plants, turnips, and carrots.

The seed corn maggot is reported as seriously damaging potato seed pieces and corn in Ohio, Indiana, Michigan, and Missouri, and doing some damage in Iowa. It was also reported as destroying water-melon seeds in Utah and peas in Minnesota.

The Colorado potato beetle appears to have been favored by the prolonged drought along the north Atlantic Seaboard. Reports of unusual abundance have been received from North Carolina to New York. On May 21 adults of this insect were collected in St. Johns County, Fla. This appears to be the first record of this insect as far south as the Hastings area in this State.

The cabbage aphid is seriously abundant on seed kale in the Norfolk district of Virginia where it may reduce the crop by half.

The weevil Tyloderma morbillosa Lec. is very serious in a number of strawberry fields in western Washington. As high as 50 adults have been found on a single plant and the plants so infested are killed in about a week.

The first emergence of the Mexican bean beetle was observed at Camden, Del., on May 6. In the Norfolk district of Virginia adults were observed in the field on the first of the month.

The pea aphid has been worse on the Eastern Shore of Maryland than it has been for many years.

Heavy stripping of the early foliage of elm by Calligrapha scalaris Lec. is being reported in Webster, Nuckolls, and Furnas Counties in Nebraska.

In the vicinity of Augusta, Me., the larch case bearer has defoliated approximately one-fourth of the larch trees. Many of these trees have been killed by this insect in previous infestations.

A severe infestation of the spruce budworm in the Shoshone National Forest has been under way for three or four years.

The spruce needle miner (Epinotia nanana Treitsche) is reported as seriously affecting spruces in northern Illinois and southern Wisconsin.

Canna leaf rollers are very heavily infesting commercial plantings of cannas in the southern part of Mississippi.

The Argentine ant has been found in three municipal greenhouses in Baltimore, Md.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR MAY, 1930

The wheat stem sawfly is reported to have passed the winter with 100 per cent survival in the central part of Alberta. This pest increased markedly in 1929, and approximately 10 to 15 times as many larvae overwintered last year as in the year previous. Heavy infestations are anticipated this season if conditions remain favorable.

In southern Ontario observations indicate that the winter mortality of larvae of the European corn borer was considerably lower than during the past three years. Given favorable conditions, an increase in infestation may be expected during 1930.

Infestations of the early cutworm, Euxoa tristicula Morr., have been reported from sections of southern Alberta and southwestern Saskatchewan. Reports at present available do not indicate any serious or extensive damage.

The tarnished plant bug caused serious damage early in the season to fruit buds in orchards of the Okanagan Valley, British Columbia. Pears were more seriously damaged than apples. This species has been noted as conspicuously abundant in southern Quebec, near Montreal, and in sections of southern Ontario.

A further decline in the abundance of budmoths, notably the eye-spotted budmoth, is indicated in the Annapolis Valley, Nova Scotia.

Eggs of the European red mite were more prevalent than usual in practically all sections of the Annapolis Valley, Nova Scotia, and were also considerably in evidence in orchards in sections of New Brunswick. The eggs were hatching on May 9. In the Annapolis Valley it is believed that this mite will probably be one of the worst orchard pests of 1930.

Eggs of the European apple sucker commenced to hatch in the Annapolis Valley, Nova Scotia, on May 10. This species is reported to be more numerous in the valley than for several years and is widespread throughout the entire fruit district.

Tent caterpillars are again reported very numerous on Vancouver Island and in the lower Fraser Valley, British Columbia. They are also noted as on the increase in sections of Prince Edward Island and New Brunswick.

The larch case bearer was exceptionally abundant on larch, in Ontario, in the early part of May, causing conspicuous foliage injury.

A severe infestation of ticks affecting cattle, occurred in the interior of British Columbia, this spring, and many cases of tick

paralysis were reported from the Nicola Valley, Ashcroft, and the Marron Valley, during April. In the Nicola district several hundred head were sick and in various stages of paralysis, and a number died as a result of the tick infestation. Blow flies also caused much trouble. The recently dehorned cattle, when paralysed by the ticks, fell on the stony hillsides and broke open the healing wounds, thus giving access to the flies. The heads of many of the cattle consequently contained masses of maggots right into the core of the horns.

CUTWORMS (Noctuidae)

Massachusetts J. V. Schaffner, jr. (May 22): Many reports have been received from Melrose and vicinity of the large amount of damage being done in small vegetable and flower gardens.

New York Weekly News Letter, N. Y. State Coll. Agr. (May 26): What few cabbage plantings there are in Dutchess County have shown considerable damage from cutworms.

Virginia P. J. Chapman (May 31): Cutworms are scarce at Norfolk.

Florida E. W. Berger and G. B. Merrill (May 20): Cutworms are very abundant on lawn grass in Silver Springs.

Ohio T. H. Parks (May 21): Cutworms were reported moderately abundant and damaging tomatoes in commercial plantings growing in Auglaize County. They do not appear to be more abundant than usual in cornfields.

Indiana J. J. Davis (May 22): Cutworms have been reported numerous in many sections of the state. Specific records as follows: At Muncie, Marion, and Liberty, attacking corn; at Indianapolis and Culver, attacking garden plants; at Fort Wayne, damaging tomato, cabbage, and carrots; and cabbage and tomato at Remington. These reports were received during the interval April 29-May 19.

Illinois W. P. Flint (May 19): As is to be expected with the general early planting of corn, reports of cutworm damage are coming in from various parts of the State, particularly the central part. From specimens received, the black cutworm (Agrotis ypsilon Rott.) and the clay-backed cutworm (Feltia gladiaria Morr.) are the two most common. A few common armyworms (Cirphis unipuncta Haw.) have also been sent in with the cutworms.

Kentucky W. A. Price (May 21): Cutworms are moderately abundant over the State; on corn principally.

Minnesota A. G. Ruggles and assistants (May): Reports from Martin, Hennepin, Morrison, Fillmore, Chisago, and Dakota Counties indicate that cutworms are moderately abundant.

South Dakota A. L. Ford and H. C. Severin (May 20): Cutworms are moderately abundant over the entire State and doing much damage to gardens in eastern South Dakota.

Iowa H. E. Jaques (May 22): Cutworms are reported as moderately abundant on corn, garden crops, etc., in Floyd, Johnson, Jefferson, Henry, Decatur, and Pottawattamie Counties and very abundant in Fayette, Clayton, Buchanan, Jackson, Lcuisa, Davis, Union, Cass, Audubon, Boone, and Calhoun Counties.

Missouri L. Haseman (May 27): Cutworms are moderately abundant at Columbia. Some cornfields are severely damaged.

Nebraska M. H. Swenk (May 13): Army cutworms (Euxoa auxiliaris Grote) continued troublesome in western and central Nebraska until a little after the middle of April. The last reports were received April 16 from Dawson County where they were still injuring the alfalfa fields. Other cutworms started damaging truck crops about May 7. More than the usual amount of damage to corn is looked for this spring as a result of the prolonged period of cool rainy weather that has prevailed during the last half of April and the first half of May. (May 19): Cutworms of various species are moderately to very abundant in eastern Nebraska.

Minnesota A. G. Ruggles (May 26): Wireworms are killing flax at Rochester and McIntosh and onions at Princeton.

Oklahoma C. F. Stiles (May 5): Cutworms are very abundant in western Oklahoma.

Mississippi R. W. Harned and assistants (May): Cutworms in general are very abundant in some gardens in Tate County, and moderately abundant in the northern third of the State, while Agrotis ypsilon Rott. is moderately abundant in Harrison and Jackson Counties.

Montana W. B. Mabee (May 20): The reports of damage from the pale western cutworm (Porosacrotis orthoconia Morr.) are beginning to come in. They have done somewhere between 15 and 20 per cent damage to the wheat in a large area in eastern Jefferson County. The larvae are about half grown, being two to three weeks earlier than normally. Red backed cutworms (Euxoa ochrocasta Guen.) are reported as moderately abundant in Ravalli County.

Nevada G. G. Schweis (May 20): Reports of cutworm damage in gardens at Reno have reached this office.

Utah G. F. Knowlton (May 1): Cutworms are damaging beets and carrots southeast of Salt Lake City. (May 3): Only a few farms in Weber County have had enough cutworm damage to beets to require the use of poisoned bait. Cutworms are moderately abundant in Davis and Weber Counties, damaging late planted tomatoes. Some poisoning is done, but in many cases the few lost plants are replaced and no more damage is found. (May 19): Cutworms are moderately abundant in northern Utah, a few instances of damage to tomatoes, beets, etc., being observed.

Washington

Wm. W. Baker (May 10): A *Euxoa* species which was quite destructive in new fields in April has practically ceased feeding. (May 24): Cutworms are moderately abundant at Grand Mound; two species of *Euxoa* in strawberries and two in black caps.

Oregon

L. P. Rockwood (May 7): Cutworms (*Euxoa* sp.) have been destructive to garden crops in some localities in the Willamette Valley. Adults of *Lycophotia margaritosa* Haw. were taken in bait traps at Forest Grove on May 1.

WIREWORMS (Elateridae)

Maine

H. B. Peirson (May 19): Wireworms are moderately abundant; a single outbreak reported at Augusta.

Indiana

J. J. Davis (May 22): Wireworms were damaging corn at Delphi May 13, and reported abundant in plowed ground at Indianapolis May 14, and Liberty Mills May 20.

H. K. Riley (May 20): A wireworm (species undetermined) was found damaging small onions in pickling-onion patches.

Illinois

E. P. Flint (May 19): Wireworms are causing rather severe damage in south-central and southern Illinois. Many reports have come in during the last two weeks giving infestations running from three to eight and ten wireworms per hill of corn over an entire field.

J. H. Bigger (May 17): Wireworms are very abundant. Several thousand acres of corn will be replanted.

Michigan

R. H. Pettit (May 5): Two wireworms (*Limonius* sp.) were gathered from a field of raspberries at Lawrence near South Haven. These wireworms are accused of destroying many black raspberry patches, that is, the new growth of recently set plants in the sandy loam soil that is very strongly acid. The grower having these worms on his raspberries wrote that he had lost all of his young plants in one part of the field and a good share of the plants in a planting of 5 acres.

Minnesota

A. G. Ruggles and assistants (May): Wireworms are very abundant in a 20-acre field 10 miles east of Royalton, Morrison County, moderately abundant in Dakota and Martin Counties, and scarce in Brown and Chisago Counties.

North Dakota

J. A. Munro (May 21): Under date of May 19, Mr. V. C. Hubbard of the Great Plains Field Station at Mandan reports that wireworm injury to barley in that vicinity has made necessary the reseeding of a number of plots. This is the first report on wireworm activities received this season.

South Dakota A. L. Ford and H. C. Severin (May 20): Wireworms are moderately abundant in Brown County, causing damage to spring wheat. One man reports 50 per cent of stand gone.

Iowa H. E. Jaques (May 22): Wireworms are reported as moderately abundant on corn in Clayton, Buchanan, Calhoun, Boone, Pottawattamie and Decatur Counties; and as very abundant in Floyd, Fayette, Union, Davis, Van Buren, Jefferson, Henry, and Louisa Counties.

Nebraska M. H. Swenk (May 19): Wireworms (Melanotus sp.) are moderately abundant in eastern Nebraska.

Oklahoma C. F. Stiles (May 5): Wireworms are moderately abundant in western Oklahoma.

Mississippi K. L. Cockerham (May 9): We have already had one adult Heteroderes laurentii Guer. emerge in the laboratory and have been collecting pupae from the field since the 17th of April. On May 2 and 3 field digging indicated that pupation was about 25 per cent completed at that time. I think that by the 20th adults will be fairly plentiful and at the same time we will be able to find full-grown larvae and pupae and we should have some eggs also.

Montana H. Gladney (May 15): Wireworms are moderately abundant at Ocean Springs.

Idaho W. B. Mcbee (May 20): Wireworms are moderately abundant on wheat in Gallatin County.

Canada Claude Wakeland (May 22): The usual large number of complaints are being received about wireworms that are always received at this time of year from the irrigated districts of southern Idaho, and many inquiries for methods of control.

Maryland G. M. Stirrett (May 17): There are four or five acres of land at Chatham, Ontario, infested with wireworms (Limonius sp. and Melanotus sp.) at the rate of 4.5 larvae to the square foot, this average being based on a small number of square-foot counts. This would figure out at 209,088 larvae per acre. The counts were made to a depth of three inches. They apparently did considerable damage last year in the same ground, but it is very difficult to get any previous history regarding the tract.

WHITE GRUBS (Phyllophaga spp.)

Maryland W. M. Davidson (May 10): Specimens of Phyllophaga hirticula Knoch and P. inversa Horn were collected from tops of linden and ash trees on the grounds of a golf course at Silver Spring. These beetles, working about sunset, have defoliated the tops of several trees the past few days.

Ohio T. H. Parks (May 21): White grubs are moderately abundant generally.

Indiana J. J. Davis (May 22): White grubs were attacking corn and oats in Benton County May 19.

Michigan R. H. Pettit (May 16): In a number of places in southern Michigan the sad June beetle (P. tristis Fab.) is plentiful. It is appearing in the evening around maple trees and buzzing like a swarm of bees, much to the astonishment of the populace.

Minnesota A. G. Ruggles and assistants (May): White grubs are moderately abundant in Rock, Le Sueur, Morrison, Fillmore, Chisago, and Dakota Counties. All three stages of the life cycle were found in the same field in Rock County.

Iowa C. N. Ainslie (May 22): Small larvae from last year's eggs are very numerous in gardens and fields in the vicinity of Sioux City. Full-grown larvae are seen occasionally.

 H. E. Jaques (May 22): White grubs are moderately abundant in Floyd, Calhoun, Boone, Audubon, Cass, Pottawattamie, Decatur, and Johnson Counties, and very abundant in Clayton, Buchanan, Jackson, Keokuk, Jefferson, Henry, Louisa, Davis, and Union Counties on corn, potatoes, strawberries, and in gardens.

Mississippi R. W. Harned and assistants (May): May beetles are very abundant on various trees at Ocean Springs and moderately abundant on pecan in Marion, Lamar, Forrest, Perry, and Pearl River Counties.

Nebraska M. H. Swenk (May 13): The first report of injury this spring was received on April 25, this report relating to injury to newly planted grape vines. (May 19): White grubs are moderately abundant in eastern Nebraska.

Kansas R. L. Parker (May 22): May beetles are reported attacking honeysuckle, japonica, weigelia, and hydrangea, and in lawns at Concordia.

Texas H. J. Reinhard (May 22): Numerous specimens of P. submucida Lec. and P. crinita Bunn. were taken in light traps on May 19 in Hidalgo County. The first specimens of the year of P. torta Lec. and the most abundant species, P. crassissima Blanch. and P. praetermissa Horn, were taken in light traps at College Station. The number of P. praetermissa decreased rapidly after May 10. P. calceata Lec. was very common during the latter half of March and throughout April. Practically no specimens were taken in light traps after May 10 at College Station.

Nevada

G. G. Schweis (April 29): Specimens were sent in by a county agent with remarks that the grubs were attacking potatoes and threatening to become serious in Humboldt County.

ASIATIC BEETLE (Anomala orientalis Waterh.)

Connecticut

R. B. Friend (May 24): More spring injury by grubs than usually occurs is being reported.

JAPANESE BEETLE (Popillia japonica Newm.)

Connecticut

W. E. Britton (May 24): Larvae are moderately abundant in certain areas.

TARNISHED PLANT BUG (Lycus pratensis L.)

Rhode Island

A. E. Stene (May 29): The tarnished plant bug is showing up rather earlier than usual, which may indicate prospects of more or less damage later.

Minnesota

H. C. Donohoe (May 27): The tarnished plant bug is moderately abundant in alfalfa at Buffalo, Harmel, Maple Lake, and Silver Creek.

FLOWER THrips (Frankliniella tritici Fitch)

Michigan

R. H. Pettit (May 16): There has appeared in Michigan, apparently all over the State, an epidemic of what we take to be Frankliniella tritici. It is plentiful now on peach, apple, pear, cherry, strawberry, and many other plants. This is the same thrips that years ago produced scabbiness on peaches, a scabbiness which has been confused with the work of the tarnished plant bug. If my identification is right this thrips is known variously as the flower thrips, peach thrips, oat thrips, corn thrips, and wheat thrips.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WEAT

HESSIAN FLY (Phytomyza destructor Say)

Ohio

T. H. Parks (May 21): Hessian flies are scarce in central counties.

Illinois

W. P. Flint (May 19): Examination of fields known to be very heavily infested have shown that the Hessian fly in western and central Illinois received a severe set-back this spring. Heavy emergence of adults occurred during the warm period from April 10 to 16. This was followed by a cool period, and apparently either the cold weather or rains which occurred during this period had a very detrimental effect on the eggs.

and young larvae, as the infestation has been materially reduced over that of last fall in the same fields. Occasional fields, especially in the southwest-central part of the State, showed heavy infestation; but as a rule the spring brood does not cause the normal amount of damage.

Missouri

K. C. Sullivan (May 23): The Hessian fly is moderately abundant in central Missouri. Heavy in some counties.

Nebraska

M. H. Swenk (May 19): The Hessian fly is very abundant in southeastern Nebraska. Considerable acreage is being plowed up.

Kansas

R. L. Parker (May 22): The Hessian fly was very abundant on wheat May 18 at Wilson, Ellsworth County.

Oregon

M. M. Reeher (May 7): Hessian fly "flaxseeds" of the first generation were found April 25, about two weeks earlier than usual. Infestation of winter wheat and early spring-sown wheat by the first spring brood is heavier than normal in Washington and Yamhill Counties. Conditions appear favorable for a large and early second spring brood.

WHEAT JOINT WORM (*Harmolita tritici* Fitch)

Oregon

T. R. Chamberlin (May 7): The first adults were swept April 17 in the infested region in Clackamas County. This is eight days earlier than the earliest previous record.

FIELD CRICKET (*Gryllus assimilis* Fab.)

North Dakota

J. A. Munro (May 21): Six black field crickets (all males) were collected in the vicinity of Fargo on May 11; one was an adult, and the other five were in the last nymphal stage. It appears that they had all wintered over as nymphs. Nymphs from overwintering eggs have not been observed as yet.

Montana

W. B. Mabee (May 20): Black crickets are unusually abundant on one field of about 7,000 acres of wheat in Big Horn County. They have fed upon the wheat but are not sufficiently abundant to cause serious damage as yet.

MORMON CRICKET (*Anabrus simplex* Hald.)

Montana

W. B. Mabee (May 20): Mormon crickets are very abundant in Sanders County; are on the verge of outbreak numbers. This is the same area in which severe outbreaks occurred during 1926 and 1927.

CORNCHINCH BUG (Blissus leucopterus Say)

Missouri K. C. Sullivan (May 23): A few chinch bugs are reported.

Kansas R. L. Parker (May 22): The chinch bug is scarce in Kansas.

Arkansas Dwight Isely (May 23): Chinch bugs were observed attacking young corn in central and northeastern Arkansas early in May in Pulaski, Lonoke, Arkansas, St. Francis, Crittenden, and Mississippi Counties.

Mississippi F. A. Smith (May 18): The chinch bug is very abundant in west Tate County and east Tunica County. They have killed much corn.

CORN EAR WORM (Heliothis obsoleta Fab.)

Florida E. W. Berger and G. B. Merrill (May 20): The corn ear worm is moderately abundant on dahlia buds in Gainesville.

J. R. Watson (May 20): The corn ear worm is moderately abundant on corn as a budworm, and on garden peas and tomatoes.

Alabama J. M. Robinson (May 24): The corn ear worm is very abundant in Opelika; is going from Austrian pea to peach crop.

Louisiana W. E. Hinds (May 30): The corn ear worm is reported as very abundant in general and is attacking corn especially.

Mississippi K. L. Cockerham (April 25): The corn ear worm was found damaging corn at Biloxi by eating in the bud of stalks just prior to tasseling.

R. W. Harned and assistants (May): This insect is moderately abundant on tomatoes at Lucedale, Wiggins, Terry, and Ocean Springs, and on beans at Kreole.

Texas S. W. Clark (May 12): The corn ear worm is causing considerable injury near Rio Hondo.

F. L. Thomas (May 15): Worms have been causing injury to green tomatoes at Palestine and Navasota. The tomatoes have been planted on a commercial scale and considerable injury is reported by the growers and county agents.

STALK BORER (Pseudaletia separata Guen.)

Ohio T. H. Parks (May 21): Young stalk borers are already found in corn plants where timothy sod was plowed under in preparation for corn. The borer is moderately abundant on corn in Union County.

Indiana

J. J. Davis (May 22): The stalk borer was reported May 19 infesting and destroying ~~Delphinium~~ and hollyhock at LaPorte.

Kansas

R. L. Parker (May 22): The stalk borer is scarce; reported on golden elder at Coffeyville May 8.

Minnesota

A. G. Ruggles (May 26): The stalk borer is starting to bore into the stalks of corn at St. Paul and Minneapolis.

Missouri

L. Haseman (May 27): The common stalk borer is just beginning to attract attention. The small larvae have ruined the stand of corn in many fields in central Missouri and are beginning to attract attention of gardeners and commercial truck crop growers.

Mississippi

N. L. Douglass (May 15): The stalk borer is doing considerable damage to tomato plants in Yalobusha County.

SOD WEBWORMS (Crambus spp.)

Ohio

T. H. Parks (May 21): Webworms are now seriously damaging young corn plants in many fields of central and western Ohio. They are less than half grown and are causing some farmers to replant. This is the most serious infestation in Ohio since 1926.

Indiana

J. J. Davis (May 22): Webworms have been very abundant and destructive to corn over large areas in Union, Wayne, Miami, Grant, Floyd, and Randolph Counties. These reports were received during the period May 11-17.

Illinois

W. P. Flint (May 19): Sod webworms are causing more than the normal amount of damage throughout central Illinois. Corn was planted unusually early, planting being practically finished at this time, and at least 30 to 50 per cent of the corn is already up. The species have not been definitely determined, but apparently C. teterrellus Zincken is one of those concerned. The webworm larvae are about half grown at this time in most fields.

J. H. Bigger (May 17): Webworms are very abundant. Reports from several counties indicate that from 15 to 60 per cent of the corn has been destroyed in sod land. Several thousand acres will be replanted.

Kentucky

W. A. Price (May 21): A sod webworm (Crambus luteolellus Clem.) is the outstanding corn insect in this State at the present time. It is doing serious damage in Kenton, Bourbon, Lincoln, Woodford, and Jessamine Counties.

Iowa

H. E. Jaques (May 22): Sod webworms are moderately abundant in Floyd County.

Missouri

L. Haseman (May 27): During the month there have been a few fields of corn that have been seriously damaged.

K. C. Sullivan (May 23): A sod webworm is reported on corn at Ashland.

SEED CORN BEETLE (Agonoderus pallipes Fab.)

Kansas

R. L. Parker (May 22): The seed corn beetle is reported attacking corn sprouts at Fort Scott.

GRAPE COLASPIS (Colaspis brunnea Fab.)

Louisiana

T. E. Holloway and J. W. Ingram (May 22): This small beetle was found to be making irregular holes in the central leaves of young corn near Raceland.

RED-FEADED FLEA BEETLE (Systema pallicornis Schiff.)

Mississippi

R. W. Harned (May 21): A medium infestation of flea beetles, Systema frontalis, was reported on cotton and corn from Church Hill in Jefferson County on May 20.

SOUTHERN CORN LEAF BEETLE (Myochrous denticollis Lec.)

Indiana

J. J. Davis (May 22): The southern corn leaf beetle was sent in with the report that it was destroying 90 per cent or more of the corn in a large field near Patriot, Switzerland County. The beetles appeared and destroyed the corn between May 1 and 6, as many as 11 beetles per hill being found. The field had been in alfalfa and blue grass and had not been mowed for two years. It was plowed in February and planted early. The beetles seem to feed mostly on the stem below ground.

Kentucky

W. A. Price (May 21): The southern corn leaf beetle is doing serious damage to corn at Greenville and Alexandria.

CORN BILLBUGS (Sphenophorus spp.)

Missouri

L. Haseman (May 28): A serious outbreak of corn billbugs was reported by Paul H. Johnson in Scott County, May 20-25, Sphenophorus destructor Chitt. being the most important.

ALFALFA AND CLOVER

ALFALFA WEEVIL (Phytonomus posticus Gyll.)

Idaho

Claude Wakeland (May 22): The alfalfa weevil is not alarmingly numerous at Parma; weather now cool and rainy. Weevil activity not likely to be sufficient to cause severe injury.

Nevada G. G. Schweis (May 20): Some damage is now appearing; control measures may be necessary at Reno and Fallon.

Utah G. F. Knowlton (May 19): Alfalfa weevils are moderately abundant in Ogden and Horner.

CLOVER LEAF BEETLE (Hypera punctata Fab.)

Indiana J. J. Davis (May 22): The clover leaf beetle was conspicuously common throughout central Indiana and reports of damage to clover and alfalfa were received from Muncie, Windfall, and Kokomo, April 29 - May 8.

CLOVER HAY WORM (Hypsopygia costalis Fab.)

Nebraska M. H. Swenk (May 13): A Jefferson County correspondent reported on May 8 that his stacked alfalfa hay was severely infested with the clover hay worm.

ALFALFA CATERPILLAR (Eurytus eurytheme Boisd.)

Arizona C. D. Lebert (May 21): A great many adults were noticed in various fields in the vicinity of Phoenix. The insect appears to be general throughout the State.

PEA APHID (Illinoia pisi Kalt.)

Kentucky W. A. Price (May 21): The pea aphid is very bad on alfalfa in Fayette County. As many as 50 on a single stem with many winged forms were observed April 27.

Kansas R. L. Parker (May 22): The pea aphid is reported from Larned on alfalfa.

Arizona C. D. Lebert (May 21): The pea aphid is general on alfalfa throughout the Salt River Valley.

Utah G. F. Knowlton (May 3): Green pea aphids are fairly abundant on alfalfa.

Oregon L. P. Rockwood (May 7): Alfalfa which had been previously injured by this species at an earlier date was seen in Umatilla County, near Boardman, on May 3. A very few mature winged and wingless agamic females and some very early-stage larvae were swept on this date. Great numbers of coccinellid pupae, larvae, and fresh soft-adults of the species Coccinella transversoguttata Fab. were swept. These predators appear to have eliminated a destructive outbreak in this case. Illinoia pisi are still not so numerous as usual on vetch and alfalfa in Washington County.

F R U I T , I N S E C T S

APPLE

APHIDS (Aphidae)

Massachusetts A. I. Bourne (May 20): Fruit aphids are absent or very scarce.

Connecticut W. E. Britton (May 24): The fruit aphids are scarce.

M. P. Zappe (May 22): Aphids on apples hatched in about the usual numbers in the southern part of the State, but are very scarce now.

New York Weekly News Letter, N. Y. State Coll. Agr. (May): The fruit-aphid situation in New York has not very materially changed since last month. The apple aphid seems to be slightly more numerous and the rosy apple aphid appears to be decidedly on the increase in the Lake region.

Minnesota A. G. Ruggles and assistants (May): Fruit aphids have been reported as scarce in Rock and Lyon Counties, moderately abundant in Brown County, and very abundant in Hennepin County.

Utah G. F. Knowlton (May 19): Fruit aphids are very abundant at Farmington, curling leaves badly.

APPLE APHID (Aphis pomi DeG.)

New Hampshire F. R. Lowry (May 28): Green apple aphids are only moderately abundant around Durham.

Vermont H. L. Bailey (May 26): Aphis mali, hatched from eggs about May 1, is moderately abundant in Topsham and Bradford.

New York Weekly News Letter, N. Y. State Coll. Agr. (May 12): Green aphids are numerous in some orchards in Dutchess County; in Wyoming County the green aphids all seem to be relatively scarce, due presumably to abundance of parasites.

Delaware L. A. Stearns (May 20): Apple aphids were moderately abundant May 9; calyx application just concluded.

Illinois J. H. Bigger (May 17): Apple aphids are scarce in the western fruit area.

Kentucky W. A. Price (May 21): The fruit aphid is very abundant in western and central Kentucky.

Missouri R. M. Jones (May 22): Green apple aphids are moderately abundant in Marionville.

Mississippi

J. P. Kislanko (May 20): Aphis pomi is very abundant at Wiggins.

ROSY APPLE APHID (Anuraphis roseus Bak.)

Maryland

E. N. Cory and assistants (May 20): The rosy apple aphid is moderately abundant on the Eastern Shore and at College Park.

Virginia

P. J. Chapman (May 21): Anuraphis roseus is moderately abundant.

Georgia

C. H. Alden (May 21): Rosy apple aphids are moderately abundant in Cornelia.

Ohio

T. H. Parks (May 21): Colonies of this plant louse are more abundant than usual on foliage of apple trees in Lawrence County in southern Ohio. Some of the young fruit has already been deformed. No infestation has been observed elsewhere in the State.

Kentucky

W. A. Price (May 21): This aphid is very abundant over western and central Kentucky.

Missouri

L. Haseman (May 27): Rosy apple aphids are moderately abundant at Columbia. They are more abundant than usual.

R. M. Jones (May 22): The rosy apple aphid is moderately abundant in Seymour.

Arkansas

Dwight Isely (May 23): The rosy aphid is rather generally distributed on apples in northwestern Arkansas.

CODLING MOTH (Carpocapsa pomonella L.)

New York

Weekly News Letter, N. Y. State Coll. Agr. (May 26): The codling moths are now emerging in large numbers in Ulster County.

Delaware

L. A. Stearns (May 20): Reports of the codling moth show 69 per cent overwintered larvae transformed by May 1, and 92 per cent transformed and 19 per cent emerged by May 11 at Camden; calyx application just concluded. First emergence in southern Delaware May 3; in northern Delaware May 9.

Maryland

E. N. Cory and assistants (May 20): The codling moth is moderately abundant. It was emerging on May 6 and 7 on the western and eastern shore.

Ohio

T. H. Parks (May 21): Emergence is being followed at four observation stations over the State. In Lawrence

County, southern Ohio, emergence commenced April 30, with temperature suitable for egg-laying during the following two weeks. Larvae were beginning to enter the apples May 15. Moth emergence is continuing. At Columbus emergence commenced May 6 and is continuing daily. At Oak Harbor on the west end of Lake Erie only a few moths have emerged and the evening temperatures have been too cool for any egg-laying. In southern and central Ohio the first cover spray was advised for two weeks after bloomfall. The spray has not yet been advised for northern Ohio.

Indiana

J. J. Davis (May 23): The codling moth is generally moderately abundant in southern Indiana.

Illinois

W. P. Flint (May 19): According to Mr. Chandler's observations, the codling moth began emerging at Carbondale on April 30. Emergence started apparently at about the same time in western Illinois, as adults were seen on May 4. Adults were also present at Urbana on May 4, there being less difference than usual in the time of the start of emergence in the southern and central parts of the State. Eggs are very scarce in orchards. The effect of the high winter mortality is quite apparent.

Kentucky

W. A. Price (May 21): The codling moth is moderately abundant over the State generally.

Iowa

H. E. Jaques (May 22): The codling moths are moderately abundant in southern Iowa.

Missouri

R. M. Jones (May 22): The codling moth is very abundant on apples in southwest Missouri.

K. C. Sullivan (May 23): The codling moth is generally moderately abundant. Cool weather has delayed emergence, particularly in the northern part of the State.

L. Haseman (May 28): The codling moth began emerging early this year but was checked by two weeks of cold weather and has in the last few days again gone forward with heavy emergence, reaching a peak apparently at Columbia, New Franklin, Waverly, and Independence May 20-23, and at St. Joseph May 26-28. In the Ozarks moths are a few days ahead of those at Columbia.

Minnesota

A. G. Ruggles and assistants (May): Reports indicate that this insect is moderately abundant in Fillmore, Brown, and Rock Counties, and scarce in Hennepin County.

Nebraska

M. H. Swenk (May 13): The first moths of the spring brood emerged in the insectary at Lincoln on May 3, which was 16 days earlier than the first emergence in 1929 and 20 days earlier than the first emergence in 1928. The first moths were collected in bait traps in the orchard on May 8, and others have been collected each warm night since. The mortality of wintering larvae was very heavy during the winter of 1929-30. Out of 611 larvae in cocooning racks in the out-of-doors insectary, 316, or nearly 52 per cent, died during the winter. About the same percentage of winter-killed larvae are found under natural conditions in the orchard.

Kansas

R. L. Parker (May 22): The codling moth is moderately abundant at Belle Plaine; first eggs April 14; first larvae May 9, at least three days old when observed, as reported by P. M. Gilmer.

Arkansas

A. J. Ackerman (May 5): Emergence of spring-brood moths at Bentonville began April 20. Approximately 1,300 moths, or about 16.5 per cent of the overwintered larvae, emerged between April 20 and May 4. In 1929 only about 6 per cent had emerged by May 4. Because of the high mortality of overwintering worms due to the January (1930) sub-zero temperatures, a large supply of larvae was collected in orchards during February, 1930, for supplementary material. The emergence of moths from these larvae, kept in pupa sticks in the insectary, began the third week in March, about one month earlier than the first emergence of moths from fall-collected material.

Idaho

Claude Wakeland (May 22): The codling-moth activity began much earlier than in 1929. The first cover spray was applied in 1930 earlier than the calyx spray was applied in 1929, and the second cover this year will probably be applied only a day or two later than calyx spray was applied in 1929.

Nevada

G.G. Schweis (May 20): The codling moth is moderately abundant at Reno.

Utah

G. F. Knowlton (May 19): The codling moth is moderately abundant in northern Utah; a few adults are emerging.

Washington

Calif. Spray-Chemical Co., Vol. 2, No. 2, "Ortho News" (May 10): The first flight of codling moths took place almost simultaneously in several northwest districts. The first flight indicated by our bait pots in the Broadway district was on the night of April 22. This coincides, practically, with moth flight recorded in the lower Yakima Valley, at Selah and in the Wenatchee districts. Since this first flight fluctuating evening temperatures, mostly cool, have caused intermittent emergence of comparatively few moths.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Maine H. B. Peirson (May 10): The eastern tent caterpillar is very abundant in general. Many reports of damage to cherries have been received. (May 19): Eastern tent caterpillars are very abundant at Augusta.

New Hampshire P. R. Lowry (May 28): Eastern tent caterpillars are not so common as usual in southeastern quarter of the State.

Massachusetts A. I. Bourne (May 20): The eastern tent caterpillar is fairly abundant in Bristol and Plymouth Counties, but scarce elsewhere in the State.

J. V. Schaffner, Jr. (May 23): During this month several observers reported the eastern tent caterpillars fully as abundant through the eastern section of Massachusetts as it was in 1929. In some localities of southern Norfolk, northern Bristol, and Essex Counties, wild cherries are badly defoliated.

Connecticut W. E. Britton (May 22): The eastern tent caterpillar is much less abundant than usual, only one nest having been seen this year and that in Bethany. Mr. Zappe saw two in Goshen and none elsewhere.

E. P. Felt (May 26): The tents are very scarce. There was practically none in the Stamford area last year and there seems to be no material increase this season.

New York Weekly News Letter, N. Y. State Coll. Agr. (May 12): There is only a scattering of tent caterpillars in Columbia County.

Delaware L. A. Stearns (May 9): The eastern tent caterpillars are apparently less common than usual.

Maryland E. N. Cory and assistants (May 20): The eastern tent caterpillars are very abundant in Prince Georges and Anne Arundell Counties.

Virginia P. J. Chapman (May 21): The eastern tent caterpillar is moderately abundant in Norfolk.

Utah G. F. Knowlton (May 6): Tent caterpillars are present in many orchards in Utah County, requiring increased arsenic in the calyx spray on apples. (May 19): Tent caterpillars were damaging snowball in one garden at Farmington and have been causing slight damage to cherry trees at Perry and Willard.

EYE-SPOTTED BUDMOTH (Spilonota ocellana Schiff.)

New Hampshire P. R. Lowry (May 28): Several acres of young trees are severely injured.

New York Weekly News Letter, N. Y. State Coll. Agr. (May): Larvae began showing up over most of the apple-growing sections the first week during the month and by the last of the month they were very numerous in the Lake region.

Utah G. F. Knowlton (May 3): The budmoth is damaging apple trees, occasionally to a serious extent, in Box Elder, Davis, Salt Lake, and Utah Counties. (May 13): Budmoths are beginning to pupate in Box Elder County. (May 19): Budmoths are largely leaving the leaves.

FALL CANKER WORM (Alsophila pomataria Harr.)

Connecticut W. F. Britton (May 21): Particularly abundant along the Prospect Street ridge in New Haven.

E. P. Felt (May 26): Fall canker worms are somewhat generally abundant and injurious in southwestern Connecticut.

New York E. P. Felt (May 26): Fall canker worms are somewhat generally abundant and injurious on Long Island and in southeastern New York, the insects being particularly abundant on the mainland in a strip along the Sound.

Minnesota R. N. Chapman (May 26): The fall canker worm is very abundant along the Mississippi River near Fort Snelling.

CASE BEARERS (Coleophora spp.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May): Case bearers are present in small numbers in the Hudson River Valley and in the Lake region; some injury is being done in unsprayed orchards in Orange and Niagara Counties.

GREEN FRUIT WORM (Graptolitha antennata Walk.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May 5): Green fruit worms began to hatch during warm weather in Dutchess County. In Ulster County they appeared about May 7.

APPLE TWIG MINER (Marmara elotella Busck)

Rhode Island A. E. Stene (April 8): Specimens of apple twigs were sent to the National Museum for determination with damage that looks very much like the tunneling of some small bark borer, determined by Dr. C. Heinrich as Marmara sp. presumably elotella Busck).

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Ohio

T. H. Parks (May 21): This insect is on the increase in central Ohio. Infested apple leaves are being received from anxious fruit growers.

ROUND-HEADED APPLE TREE BORER (Saperda candida Fab.)

New York

Weekly News Letter, N. Y. State Coll. Agr. (May 12): The first "castings" of the round-headed apple tree borer were observed on May 5 in Orange County.

FRUIT TREE LEAF ROLLER (Archips argyrospila Walk.)

Michigan

R. H. Pettit (May 16): The fruit tree leaf roller is very plentiful in the fruit districts everywhere but especially near Ludington and Grand Rapids. Larvae are now about half an inch long.

New York

Weekly News Letter, N. Y. State Coll. Agr. (May): By the middle of May leaf rollers were quite generally hatching throughout the fruit-growing section of New York State, and although no reports of very serious damage were received, the insect seems to be present in abnormally large numbers.

Utah

G. F. Knowlton (May 3): The fruit tree leaf roller is generally present throughout the apple orchards of northern Utah, sometimes doing considerable damage. It is also present on cherry at Perry and on plum at Willard.

APPLE REDBUG (Lygidea mendax Reut.)

New York

Weekly News Letter, N. Y. State Coll. Agr. (May): The apple redbug is occurring in normal abundance in the Hudson River Valley, with reports of unusual abundance in Dutchess County the last of the month.

LEAFHOPPERS (Cicadellidae)

New York

Weekly News Letter, N. Y. State Coll. Agr. (May): Apple leafhoppers were beginning to show up in Columbia County on May 12 and in Monroe County May 26. Black apple leafhoppers were very abundant in Wyoming County on May 12. Adults were found in considerable numbers in one section of Orange County on May 2.

Maryland

E. N. Cory and assistants (May 20): Apple leafhoppers are moderately abundant.

Kentucky

W. A. Price (May 21): Apple leafhoppers are moderately abundant generally over the State.

Mississippi F. A. Smith (May 18): Apple leafhoppers are moderately abundant in Tunica, De Soto, Tate, Panola, and Quitman Counties.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Vermont H. L. Bailey (May 26): The European red mite began hatching and going to buds about May 4 at Bradford and at Topsham; reported also from Castleton.

Massachusetts A. I. Bourne (May 21): The European red mite on the whole is rather less abundant than last year as shown by the number of mites hatching from overwintering eggs. In some orchards the infestation is very light. There are few orchards having a very generally heavy infestation. Mites are in some cases very abundant in small blocks more or less localized in the orchards. Baldwins, as usual, seem to have the mites in greatest abundance.

New York Weekly News Letter, N. Y. State Coll. Agr. (May): This insect seems to be well under control.

Michigan R. H. Pettit (May 16): The European red mite is plentiful, especially in Washtenaw County.

Washington Calif. Spray-Chemical Co., Vol. 2, No. 2, "Ortho News" (May 10): In our last News Letter we reported that eggs of the European red mite or the brown mite were unusually abundant in many orchards this spring. The present conditions indicate no material injury up to this time.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Indiana J. J. Davis (May 23): The oyster-shell scale is moderately abundant in northern Indiana.

Kentucky W. A. Price (May 21): The oyster-shell scale is moderately abundant.

Minnesota A. G. Ruggles (May 26): This scale is very abundant; eggs started hatching last week at St. Paul and Minneapolis.

South Dakota A. L. Ford and H. C. Severin (May 20): The oyster-shell scale is moderately abundant, spotted over the entire State. Mostly on apple and elm.

Nebraska M. H. Swenk (May 19): The oyster-shell scale is very abundant in northeastern Nebraska. During the period from April 15 to May 15 an unusual number of complaints of infestations of apple trees were received.

PEAR

PEAR PSYLLA (Psylla pyricola Forst.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May): The situation has not materially changed since our last report.

S. C. Chandler (May 16): As yet very few psyllas have been found in the pear district around Alma, where a heavy loss was sustained from this insect in 1929.

PEAR LEAF BLISTER MITE (Eriophyes pyri Pagst.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May): Injury to pears is becoming noticeable in Dutchess, Orange, and Columbia Counties.

Indiana J. J. Davis (May 22): The peach leaf blister mite was destructive to pear at Ladoga April 28.

PEAR MIDGE (Contarinia pyrivora Riley)

New York Weekly News Letter, N. Y. State Coll. Agr. (May): The pear midge appeared in large numbers in Dutchess County the last week in April, and reports up to May 19 indicate that there will be serious losses where no attempt was made to control the insect. Emergence during the last week in April and the first week in May was reported from Genesee, Ulster, and Columbia Counties.

PEAR THrips (Taeniothrips inconsequens Uzel)

New York Weekly News Letter, N. Y. State Coll. Agr. (May 19): Nymphs have been observed in Dutchess County.

PEACH

LESSER PEACH BORER (Sesia pictipes G. & R.)

Georgia O. I. Snapp (May 20): This insect is very abundant in neglected orchards and in those where trees have been injured by farm implements or low temperatures.

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

Connecticut Philip Garman (May 23): Twig injury is just appearing. Trichogramma egg parasites are being observed at New Haven.

W. E. Britton (May 24): The oriental fruit moth is moderately abundant.

New York

Weekly News Letter; N. Y. State Coll. Agr. (May): Injury had been observed May 19 in the northern part of Chautauqua County, where it seems to be worse than last year. This insect was emerging in large numbers in Ulster County on May 26.

Delaware

L. A. Stearns (May 20): Ninety-five per cent of the overwintered larvae had transformed May 1 and 100 per cent had transformed and 62 per cent had emerged May 11 at Camden; shuck application just concluded. First emergence in southern Delaware April 11; in northern Delaware May 2. First eggs deposited April 14; hatched May 2; first larvae collected in orchard May 8 at Camden.

Maryland

E. N. Cory and assistants (May 20): The oriental fruit moth is moderately abundant. First emergence occurred April 16 and peak was reached May 1.

Virginia

P. J. Chapman (May 21): The oriental fruit moth is moderately abundant.

Georgia

O. I. Snapp (May 20): While the first larvae of the season were not found until May 19, suspicious twig injury has been observed since April 29. The larvae ranged in size from about six days old to practically full grown, and are thought to be still individuals of the first generation. The infestation this year is the lightest since the insect became established in Fort Valley. There have been very few infested twigs or evidences of attack. Furthermore, the insect appeared later this year than since it became established here. Last year the first twig injury was observed on April 4. The dates of the first twig injury of the other years are: April 25, 1928; April 1, 1927; April 20, 1926; April 10, 1925. As heretofore, the oriental peach moth continues to be a peach pest of only secondary importance in this section of the Georgia peach belt.

C. H. Alden (May 21): The oriental fruit moth is scarce in Cornelia; very light spring.

Florida

J. R. Watson (May 20): The oriental fruit moth is scarce.

E. W. Berger and G. B. Merrill (May 20): The oriental fruit moth is moderately abundant in west Florida. Injured peach twigs only received.

Ohio

T. H. Parks (May 21): The oriental fruit moth is moderately abundant. Larvae feeding in twigs during May.

E. W. Mendenhall (May 26): Some evidence is seen of the oriental peach moth in Columbus. It is causing tips of the limbs to die back, to what extent of damage remains to be

seen. It has been found in every county in the state.

Indiana J. J. Davis (May 22): The oriental fruit worm is showing up in serious numbers comparable with those of 1929.
(May 23): Very abundant in general in southern Indiana.

Illinois S. C. Chandler (May 16): Peach trees 2 to 4 years old in Pulaski County showed 40 to 50 per cent of the twigs injured on May 10, while about a fourth as much injury was found in the two counties just north. Aside from Pulaski County, injury is still light everywhere in southern Illinois.

Kentucky W. A. Price (May 21): The oriental fruit moth is very abundant everywhere peaches are grown.

Michigan R. H. Pettit (May 16): The oriental fruit moth has appeared in the adult stage about two weeks ahead of normal in eastern Michigan.

Mississippi R. W. Harned and assistants (May): The oriental fruit moth is being reported in moderate abundance from several counties in the north-central part of the State.

PEACH TWIG BORER (Anarsia lineatella Zell.)

Utah G. F. Knowlton (May 3): Peach twig borers are ordinarily destructive this year, and more abundant than usual in the southern part of Davis County. (May 19): The peach twig borer is moderately abundant, and is causing some damage at Perry, Willard, Bountiful, and Farmington.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Massachusetts A. I. Bourne (May 20): Too early to determine abundance of the plum curculio yet. Just noting "stings" on fruit May 20.

Connecticut W. E. Britton (May 24): The plum curculio is moderately abundant. Adults have emerged in usual numbers.

New York Weekly News Letter, N. Y. State Coll. Agr. (May 26): Curculio injury is common in most apple orchards, especially bordering stone fences and hedges in Orange County. Great damage to apples during the past week was caused by curculios in Dutchess County, where they have been cutting apples all week. In Columbia County curculio work is showing up some on cherries, apples, and pears. Some growers put on extra sprays on apples for curculio control.

Delaware L. A. Stearns (May 20): First curculios emerged from hibernation at Camden, Milton, Millsboro, and Bridgeville in central and southern Delaware April 15 and were delayed at

Newark and Wilmington in northern Delaware until May 5, the peak of emergence in southern Delaware. Shuck application concluded May 10.

Maryland

E. N. Cory and assistants (May 20): The plum curculio is moderately abundant; April 28 the first adults were observed in western Maryland; April 16 in eastern Maryland.

Virginia

P. J. Chapman (May 21): The plum curculio is moderately abundant in Norfolk.

South Carolina

F. Sherman (May 19): The plum curculio is moderately abundant. Several recent complaints.

Georgia

W. H. Clarke (March 18-April 9): Report on jarring experiments: During above mentioned period a grand total of over 75,000 overwintering adults were collected around the edge of one orchard. The lowest catch was one from approximately 30 trees. The highest catch for any one day was 11,571. The highest number collected from any one tree was 73, but this tree was located in the corner of the orchard close to a rock fill. The first emergence of the season was recorded on February 25 when five adults were collected. The next earliest emergence was March 17.

O. I. Snapp (April 28): The first curculio larvae of the season left peach drops today. This is about two weeks later than usual. Under normal weather conditions 90 per cent of the larvae in drops leave during April. As the insect is getting a late start this year, I am anticipating only a very light second generation before the close of peach season. (May 20): The first pupation took place on May 15. The season has been unusually dry, and if there is less than the average amount of rainfall between now and the Elberta harvest, that variety may also escape a heavy second-brood attack. As a result of spraying, the heavy curculio infestation at the close of the 1929 season has been reduced to what may be termed a normal infestation at the present time. Weather conditions have also contributed to the reduction of the curculio infestation in the South. (May 23): The first beetle of the first 1930 generation transformed in the soil cell today; however, we are not expecting them to begin their escape from the soil for another two or three weeks. Transformation is taking place later than usual, except those years when there is only one generation.

C. H. Alden (May 21): The plum curculios are very abundant in Cornelia; drops wormy.

H. S. Adair (April 29): The plum curculio is reported much less abundant in peach orchards around Albany than on this date last year.

Florida J. R. Watson (May 20): The plum curculio is moderately abundant over all the State.

Ohio T. H. Parks (May 21): The plum curculio is very abundant on apples. Considerable damage to young apples has occurred in the southern half of the State. The injury is more than usual. Cherries, peaches, and plums are a failure due to late freezing weather.

Indiana J. J. Davis (May 23): The plum curculio is moderately abundant in southern Indiana.

Illinois S.C. Chandler (May 16): The plum curculio, probably because of the absolute failure of peaches, has become quite serious on apples in southern Illinois this year. In sections where peach orchards adjoin apple orchards as high as 53 per cent of the apples in well sprayed orchards show the typical curculio injuries. Interplanted orchards are generally worse than those planted separately.

Kentucky W.A. Price (May 21): The plum curculio is moderately abundant.

Minnesota A. G. Ruggles and assistants (May): The plum curculio is being reported in moderate abundance in Brown and Fillmore Counties and as very abundant in Hennepin and Lyon Counties.

Iowa H. E. Jaques (May 22): The plum curculio is very abundant in Henry County.

Missouri L. Haseman (May 27): The plum curculio has done more damage than usual on plum, cherry, and apple at Columbia. Some worms are one-half grown.

 K. C. Sullivan (May 23): The plum curculio is moderately abundant in general, and is causing considerable injury in central Missouri.

 R. M. Jones (May 22): The plum curculio is moderately abundant on apples at Mountain Grove, Seymour, and Marionville.

Kansas R. L. Parker (May 22): The plum curculio is scarce in Manhattan. None seen on cherry this year.

Alabama J. M. Robinson (May 24): The plum curculio is moderately abundant at Auburn.

Mississippi R. W. Harned and assistants (May): The plum curculio is being reported as moderately abundant to very abundant from all parts of the State.

Louisiana W. E. Hinds (May 30): The plum curculio is scarce in general on peaches and plums.

Texas F. L. Thomas (May 22): The plum curculio is moderately abundant on plums.

A BEETLE (Diplotaxis frondicola Say)

Georgia W. H. Clarke (May 1): Leaves of one-year-old trees, at Cooksville, were being eaten. Injury was heavy in part of the orchard. Hand picking and jarring at night were used by the grower in an attempt to reduce the number so as to decrease the injury. The beetles congregated at the base of the tree and just under the surface of the soil during the day, feeding at night. Forty beetles were taken from the soil under one tree.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Indiana J. J. Davis (May 22): Shot-hole borers were first observed in conspicuous numbers at Mitchell April 24, and since that date the seriousness of infestations in peach in southern Indiana has been reported from various sources. In some cases the infestation has resulted from a weakened condition as a result of San Jose scale infestation, but in general it is due to a weakened condition of the tree resulting from the freeze in January.

GREEN PEACH APHID (Myzus persicae Sulz.)

Nebraska M. H. Swenk (May 13): The green peach aphid was first reported May 1 on peach foliage in southeastern Nebraska. (May 19): These fruit aphids are very abundant in eastern Nebraska.

Nevada G. G. Schweis (May 20): Aphids are reported as damaging peaches at Reno.

Utah G. F. Knowlton (May 13): The green aphid is curling leaves of peaches and becoming abundant in a few orchards at Deweyville and Brigham City.

CHERRY

BLACK CHERRY APHID (Myzus cerasi Fab.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May 12): The black cherry aphid was reported as scarce in Niagara County, presumably owing to the abundance of its parasites.

Ohio E. W. Mendenhall (May 15): Cherry aphids are here again and some people are quite concerned.

Missouri K. C. Sullivan (May 23): Black aphids are moderately abundant on cherry in Boone County.

Utah G. F. Knowlton (May 19): The black cherry aphid is becoming very abundant at Perry.

Washington Wm. W. Baker (May 24): The black cherry aphids are moderately abundant.

EUROPEAN FRUIT LECANIUM (Lecanium corni Bouche)

Washington C. W. Getzendaner (May 24): The brown apricot scale is very common this summer, and has caused considerable damage in some cases to cherry, elm, and apple. Egg-laying is nearly completed, but none hatched as yet. No evidence of parasitism.

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

Georgia Wm. F. Turner (May 13): I would like to support the reports, on the occurrence of the rusty plum aphid, from Georgia by stating that it appears to be particularly abundant here at Fort Valley this year. Also, I found it today on Amygdalus davidiana.

Mississippi R. W. Harned and assistants (May): The rusty brown plum aphid is very abundant on plums in the southern part of the State.

Nebraska M. H. Swenk (May 13): The rusty brown aphid was first reported on plum foliage on May 9 from southeastern Nebraska. (May 19): These aphids are very abundant in eastern Nebraska.

Utah G. F. Knowlton (May 3): Aphids are rather abundant on a few plum trees at Willard.

RASPBERRY

RASPBERRY FRUIT WORM (Byturus unicolor Say)

Michigan R. H. Pettit (May 16): In our raspberry district in southwestern Michigan Byturus unicolor is working in the adult condition on the new growth of raspberries. This part of the State seems to be quite heavily infested.

Minnesota A.G. Ruggles (May 26): Adults were out in great numbers at St. Paul on May 23.

Washington R. L. Webster (April 20): Damage by beetles to opening flower buds of red raspberry is reported at Clarkston.

Kansas R. L. Parker (May 24): Snowy tree crickets are injuring raspberry in Kansas City.

BLACKBERRY

R. L. Parker (May 24): Snowy tree crickets are injuring raspberry in Kansas City.

Ohio T. H. Parks (May 21): Specimens of the blackberry crown borer and its damage were received from Monroe County May 13.

ROSE CHAFER (Macrodactylus subspinosus Fab.)

Virginia W. A. Thomas (May 21): Hundreds of these insects were observed today on cultivated blackberry at Orley, where they seem to be feeding on the open bloom and pollen. Adjacent raspberries were apparently not attacked by this insect.

GRAPE

New York Weekly News Letter, N. Y. State Coll. Agr. (May 26): Grape leafhoppers are numerous on grapes in Dutchess County.

Delaware L. A. Stearns (May 9): The grape leafhopper is abundant throughout the State.

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

Ohio E.W. Mendenhall (May 10): An outbreak of the grape leaf folder was found in Columbus on grape leaves.

GRAPE PLUME MOTH (Oxyptilus periscelidactylus Fitch)

Ohio T. H. Parks (May 21): Larvae of the grape plume moth were received from southeastern Ohio, Morgan County.

GRAPE FLEA BEETLE (Haltica chalybea Ill.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May 26): The steely beetle is not as bad as usual in Yates County.

Delaware L. A. Stearns (May 20): The grape flea beetle emerged from hibernation at Yorklyn and Hockessin April 30 and was very abundant May 5 and 15.

Ohio

T. H. Parks (May 21): Specimens and damaged grape buds were sent in early in May from Belmont County.

GRAPE PHYLLOXERA (*Phylloxera vitifoliae* Fitch)

California

Monthly News Letter of Los Angeles Co. Agri. Comm., Vol. 14, No. 5 (May 15): The phylloxera survey being conducted by the Los Angeles County Agricultural Commissioner, following the recent eradication of that pest in one vineyard at San Gabriel, has recorded a second infestation in a vineyard immediately adjacent to the initial infestation.

CURRENT AND GOOSEBERRY

IMPORTED CURRENT WORM (*Pteronidea ribesii* Scop.)

New York

Weekly News Letter, N. Y. State Coll. Agr. (May 12): Eggs of the imported currant worm are common around the Newburgh section of Orange County.

Ohio

E. J. Mendenhall (May 15): The imported currant worms are here again. They are very troublesome, attacking currants and gooseberries.

Nebraska

M. H. Swenk (May 13): Beginning about April 25 and continuing to date, there were many complaints of the stripping of currant and gooseberry bushes in southeastern Nebraska.

CURRENT BORER (*Synanthedon tipuliformis* Linn.)

Utah

G. F. Knowlton (May 6): The currant borer is doing some damage to currant bushes in Cache and Utah Counties.

CURRENT APHID (*Myzus ribis* L.)

New York

Weekly News Letter, N. Y. State Coll. Agr. (May): The currant aphid was very much in evidence in Ulster County the first week in May, yet not in such large numbers as to be alarming. This insect was present in most of the currant plantings in Orange County by May 12 and a few plantings in the Newburgh section were showing considerable injury by May 19.

South Dakota

A. L. Ford and H. C. Severin (May 20): Infestation by the currant aphid is serious in Brookings.

Utah

G. F. Knowlton (April 29): The currant aphid is damaging currants at Woods Cross. (May 3): The currant aphid is damaging currants at American Fork and Provo.

Washington

Wm. W. Baker (May 24): Currant aphids are moderately abundant.

CURRENT FRUIT FLY (Epochra canadensis Loew)

Oregon

L. P. Rockwell and Max M. Reeher (May 7): Gooseberry maggot adults were emerging at Forest Grove on April 18.

PERSIMMON

PERSIMMON BORER (Sannina uroceriformis Walk.)

Mississippi

H. Dietrich (May 20): The persimmon root borer is extremely abundant in a nursery at Lucedale.

A LEAF BEETLE (Antipus laticlavia Forst)

Alabama

J. A. Hyslop (May 22): These beetles are so numerous on Japanese persimmon at Foley that in some cases small trees are defoliated.

PECAN

PECAN SHUCKWORM (Laspeyresia caryana Fitch)

Georgia

H. S. Adair (April 29): Although the season is two or three weeks later than last year, shuckworm moths have been emerging normally as compared with last year's records. The first moth to emerge from material kept in outside cages emerged on March 12 as compared with March 19 last year. The first eggs were found on pecan leaves April 17 as compared with March 30 last year. The only larvae observed so far are found feeding in Phylloxera galls on hickory.

Mississippi

H. Dietrich (May 20): Grown larvae in hickory nut observed at Vernal on May 13.

J. P. Kislanko (May 17): The pecan shuckworms are quite abundant in the galls of hickory Phylloxera; some now are in the pupal stage in Stone County.

PECAN BUDMOTH (Proteopteryx bolliana Sling)

Georgia

H. S. Adair (May 26): Larvae are rather abundant on young pecan trees in the locality of Albany and have caused considerable defoliation.

PECAN CIGAR CASE BEARER (Coleophora caryaefoliella Clem.)

Mississippi

H. Gladney (May 15): The pecan cigar case bearer is moderately abundant on pecans at Ocean Springs.

J. P. Kislanko (May 17): The pecan cigar case bearer is more abundant this year than it was last year in Stone County.

PECAN CASE BEARER (Acrobasis juglandis LeB.)

Mississippi

H. Gladney (May 15): The pecan case bearer is moderately abundant on pecans at Ocean Springs.

R. P. Colmer (May 19): The pecan case bearer is very abundant in the vicinity of Pascagoula.

J. P. Kislanko (May 17): The pecan case bearer is scarce on the trees that were defoliated by the black pecan aphid early last year. On the trees that were not defoliated the case bearers are moderately abundant, Acrobasis juglandis LeB. predominating in Stone County.

PECAN NUT CASE BEARER (Acrobasis caryae Grote)

Georgia

H. S. Adair (May 26): The pecan nut case bearer has caused considerable damage to pecans in the Albany locality. Field counts show 30 per cent of the nut clusters infested in many orchards. The maximum oviposition period occurred between May 10 and 20.

Mississippi

J. P. Kislanko (April 25): Injury by the pecan nut case bearer to nursery stock was moderate. Several young twigs were split open and a dead larva was found in practically every case in Stone County.

H. Gladney (May 15): The pecan nut case bearer is moderately abundant on pecans at Ocean Springs.

Louisiana

W. E. Hinds (May 30): The pecan nut case bearer is doing much damage to young pecan nuts in many localities.

PECAN LEAF CASE BEARER (Acrobasis cunulae Dyar & Heinrich)

Mississippi

J. P. Kislanko (May 17): The pecan leaf case bearer is scarce on the trees that were defoliated early by the black pecan aphid last year. On the trees that were defoliated the case bearers are moderately abundant in Stone County.

FALL WEBWORM (Hyphantria cunea Dru.)

Georgia

H. S. Adair (May 26): The fall webworm, which has been abundant at Albany during the past two seasons, is beginning to appear in pecan orchards at this time.

J. B. Gill (May 29): Nests are becoming quite abundant in some pecan orchards of southern Georgia.

Mississippi

R. W. Harned (May 21): On May 20 a correspondent at Meridian sent to this office several moths of the fall webworm that were found depositing eggs on pecan leaves. On May 19 J. M. Langston observed a moth of this species depositing eggs on pecan leaves at A. & M. College.

J. P. Kislanko (May 9): The first note of the fall webworm was made on this date when several females were observed ovipositing on the leaflets of pecan in Stone County.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Georgia

J. B. Gill (May 29): Up to date only a few colonies of the walnut caterpillar have been observed in pecan orchards.

AN APHID (Myzocallis fumipennellus Fitch)

Georgia

H. S. Adair (May 26): Although the black pecan aphid was present in considerable numbers in some pecan orchards near Albany earlier in the season, it is rather scarce at this time.

Alabama

J. M. Robinson (May 24): Through the dry season the black pecan aphid has shown up in large numbers on pecan foliage at Auburn.

Mississippi

J. P. Kislanko (May 19): The black pecan aphid injury to the foliage of Schley variety of pecan is very noticeable. The aphid is more abundant on hickory in the woods than it was the previous year at this time in Stone County.

APHIDS (Monellia spp.)

Georgia

O. I. Snapp (May 15): The little hickory aphid Monellia caryella is unusually abundant at Fort Valley this year, attacking pecan foliage. Natural enemies are also abundant and may check the infestation, although considerable injury to the foliage has already been caused.

H. S. Adair (May 26): Two species of aphids (Monellia sp. and Monellia costalis Fitch) are reported as occurring in pecan orchards at Thomasville and Cairo in greater numbers than usual at this time of the year. Except in an occasional orchard they are not so numerous in this locality* (Albany).

Alabama

J. M. Robinson (May 24): Through the dry season Monellia costalis has shown up in large numbers on pecan foliage at Spring Hill. This note applies to M. nigropunctata Gran. also.

GIANT APHID (Longistigma caryae Harr.)

Mississippi

D. W. Grimes (May 19): The giant aphid is moderately abundant on pecan in Holmes, Attala, and Leake Counties.

PECAN CATOCALA (Catocala viduata Guen.)

North Carolina

Z. P. Metcalf (May 23): The pecan Catocala has been reported as seriously damaging buds of pecan trees in New Hanover County.

HICKORY SHOOT CURCULIO (Conotrachelus aratus Germ.)

Mississippi

R. W. Harned (May 21): The hickory shoot curculio has attracted a great deal of attention in several counties in the southern half of the State during the past month. Serious injury to pecan trees was reported from Jackson, Simpson, Lincoln, Covington, Rankin, Jefferson Davis, and Jefferson Counties.

PHYLLOXERA (Phylloxera spp.)

Mississippi

R. W. Harned (May 21): Phylloxera galls on pecan trees have attracted much attention in certain sections of the State during the past two or three weeks. Specimens identified by A. L. Hamner as those caused by Phylloxera devastatrix Perg. were received from Jefferson, Issaquena, Hinds, Yazoo, Sharkey, Monroe, Washington, Tallahatchie, and Sunflower Counties. Galls caused by P. notabilis Perg. were received from Pass Christian.

C. Hines (May 17): Phylloxera caryaecaulis Fitch is moderately abundant on pecans at Yazoo City and Rolling Fork.

W. L. Gray (May 17): The hickory phylloxera P. caryaecaulis is moderately abundant in Adams County.

CITRUS

CITRUS APHID (Aphis spiraecola Patch)

Florida

J. R. Watson (May 20): During the last week in April the green citrus aphid (Aphis spiraecola) was brought under very satisfactory control by the fungus Empusa fresenii. Since then the aphid has not reappeared in large numbers in the round-orange belt, but has done considerable damage to tangerines and satsumas in central Florida, the dry, hot weather being unfavorable for the development of the fungus.

CLOUDY-WINGED WHITEFLY (Dialeurodes citrifolii Morg.)

Florida

J. R. Watson (May 20): The spring brood of whitefly has been somewhat more numerous than during the last three years. The entomogenous fungi, both Aschersonia sp. and Aegerita sp., are scarce, owing to the hot, dry weather.

CITROPHILUS MEALYBUG (Pseudococcus sahani Green)

California

Monthly News Letter of Los Angeles Co. Agri. Comm., Vol. 13, No. 4 (April 15): Reports of special inspectors engaged in the annual citrophilus mealybug orchard survey bear out early statements to the effect that the situation regarding the mealybug is the most satisfactory, from the standpoint of control, that it has been since this insect became a major pest of citrus in Los Angeles County. Although only 46 per cent of the 18,000 acres to be inspected have been so far covered, the results seem indicative of the general trend of conditions. On 18 per cent of the 8,130 acres so far inspected, representing 1,448 acres of citrus recorded as infested last year, no mealybug has been found this season. Seventy-seven per cent or 6,280 acres have graded trace to light, while only 4.3 per cent or 350 acres have graded medium, and 0.7 per cent or 52 acres have graded heavy.

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Texas

S. W. Clark (May 14): This insect is generally abundant throughout the lower Rio Grande Valley. It is reproducing very rapidly and appearing on young fruit in large numbers. Appearances point to a bad season in regard to this scale.

A CUTTING ANT (Atta texana Buckl.)

Texas

S. W. Clark (May 14): These cutting ants are doing severe damage to citrus near Mission and Edcouch and they are also feeding on ornamental dates.

ORANGE DOG (Papilio thoas L.)

Mississippi

H. Dietrich (May 20): The first specimen of the orange dog was seen on satsuma at Lucedale on May 14.

CASSAVA

WHITE MUSSEL SCALE (Lepidosaphes alba Ckll.)

Haiti

H. L. Dozier (April 19): Cassava plants at Port-au-Prince are heavily infested. (Determined by H. Morrison.) Two species of primary parasites, Aphytis spp., and two secondary ones, Thysanus (Signiphora) fax (Gir.) and Thysanus maculatus (Gir.), have been reared from this scale; the latter species is very abundant.

T R U C K - C R O P - I N S E C T S

GREEN PEACH APHID (Myzus persicae Sulz.)

Virginia G. E. Gould (May 22): Individuals of this species migrated to many truck crops and weeds during May at Norfolk, but have caused no appreciable damage. Many winged females were found on spring cabbage, tomatoes, and eggplant.

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Mississippi R. W. Harned and assistants (May 21): Serious injury to tomato plants by the vegetable weevil was reported recently from Myles, Ebenezer, and Vicksburg. This insect is doing considerable damage to turnips, carrots, and tomatoes in the infested areas.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

North Carolina C. H. Brannon (May 26): The spotted cucumber beetle is unusually severe, damage is reported from all over the State on early truck crops.

FLEA BEETLES (Halticinae)

Indiana J. J. Davis (May 22): Flea beetles were reported as damaging early tomatoes and seedlings at Lafayette May 2 and Greencastle May 17.

Maine H. B. Peirson (May 14): The horse-radish flea beetle (Phyllotreta armoraciae Koch) is reported as attacking horse radish at Augusta.

BLISTER BEETLES (Meloidae)

Mississippi J. P. Kislanko (May 19): Blister beetles are doing some damage to beans and cowpeas in Stone County.

Arizona C.D. Lebert (May 21): A large blister beetle (Tegrodera erosa Lec.) is affecting truck crops west of Phoenix on land next to the desert. This beetle is often seen in large numbers on the desert.

Mississippi R. W. Harned (May 21): Blister beetles (Epicauta lemniscata Fab.) were received on May 12 from Lucedale, where they were reported as causing injury to beet and cabbage plants.

Louisiana W. A. Douglas (May 17): A large number of blister beetles (Epicauta lemniscata Fab.) were found in a garden near Crowley this morning, though none were present up to 6 o'clock yesterday afternoon. The beetles were feeding on peppers, tomatoes, snap beans, mustard, carrots, eggplants, and cabbage.

Louisiana

W. E. Hinds (May 30): Striped blister beetles (Epicauta vittata Fab.) have damaged potatoes, soy beans, and corn in spots.

Texas

S. W. Clark (May 5): Reports of isolated infestations of Epicauta vittata Fab. have been received from Weslaco; but the insect is not generally so abundant at the present time.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

Ohio

T. H. Parks (May 21): The seed corn maggot has seriously injured potato seed pieces in the ground. We have received them from two widely separated counties, and inspected one county which had about 60 per cent of the seed pieces damaged. Adults were reared and identified by Prof. J. S. Hine. No reports of damage to seed corn have been received.

Indiana

J. J. Davis (May 22): Corn seed maggot reported damaging corn in Shelby and Union Counties, May 10 and 13, respectively.

Michigan

R. H. Pettit (May 27): An unusual outbreak of the seed corn maggot has just appeared at Romeo in Macomb County. One large field was estimated to have lost 50 per cent or more of the stand of corn. This insect is common with us on beans but seldom plentiful in corn.

Minnesota

A. G. Ruggles (May 26): This insect is moderately abundant in peas at Fairmont.

Iowa

H. E. Jaques (May 22): The seed corn maggot is moderately abundant in Decatur County.

Missouri

L. Haseman (May 27): During the first part of May a number of complaints were received regarding seed corn maggots injuring germinating corn and melon seeds.

Utah

G. F. Knowlton (May 5): The seed corn maggot has been destroying watermelon seed in a few fields at Centerville.

FALSE CHINCH BUG (Nysius ericae Schill.)

Arizona

C. D. Lebert (May 21): The false chinch bug has been found on young grapes in spots throughout the Salt River Valley.

Utah

G. F. Knowlton (May 3): False chinch bugs are rather numerous in occasional fields.

A MOLE CRICKET (Scapteriscus spp.)

South Carolina

F. Sherman (May 19): Quite a number of complaints of mole crickets have been received from eastern South Carolina.

Alabama J. M. Robinson (May 24): The mole crickets have shown up in large numbers at Talladega during the dry weather.

Mississippi R. W. Harned (May 21): Mole crickets identified by J. M. Langston as Scapteriscus acletus R. & H. were received from Waynesboro on May 9. The correspondent reported that they had "ruined a seed bed of tomatoes and peppers."

GARDEN SLUG (Agriolimax agrestis L.)

Nebraska M. H. Swenk (May 13): On April 29 a man from Red Willow County reported that the slug was already doing damage in his fruit patch where heavy mulching had been applied.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

New York Weekly News Letter, N. Y. State Coll. Agr. (May): The beetle is occurring in unusual numbers in Suffolk County.

Delaware L. A. Stearns (May 20): Adults were first observed at Hockessin May 9.

Virginia P. J. Chapman (May 23): A prolonged dry period in the Norfolk-Portsmouth district has apparently favored the potato beetle. It is more injurious than usual. A few larvae have nearly completed their growth in some fields. The pest has been seen on eggplant and tomatoes, but of course is most injurious to potatoes.

North Carolina W. A. Thomas (May 8): The newly deposited eggs have hatched and the larvae are defoliating many acres of potatoes at Chadbourn where no control measures have been employed.

Georgia C. H. Alden (May 21): The Colorado potato beetle is scarce at Cornelia; few old beetles out.

Florida W. E. Stone (May 22): About 18 adult specimens were collected at Elkton, St. Johns County, May 21. Dr. Newell remarked that the insect occasionally appeared along the northern counties. It is believed, however, that there is no record of this insect as far south as the Hastings district of St. Johns County.

Kentucky W. A. Price (May 21): The beetle is moderately abundant. Larvae seen on vines May 5.

Iowa H. E. Jaques (May 22): The beetle is scarce in Henry County.

C. N. Ainslie (May 22): The beetles are already very numerous on early-planted potatoes at Sioux City. Plants are being attacked as soon as they appear above ground.

Minnesota

K. A. Kirkpatrick (May 9): The beetle is very abundant in Hennepin County.

Alabama

J. M. Robinson (May 24): The beetle is very abundant at Auburn.

Mississippi

K. L. Cockerham (April 25): This insect was found damaging Irish potatoes in a garden at Biloxi April 25. Larvae were quite plentiful.

R. W. Harned and assistants (May): This insect appears to be from moderately abundant to very abundant, as indicated by reports received from practically every section of the State.

Idaho

Claude Wakeland (May 22): A few inquiries are being received concerning the control of the Colorado potato beetle, which is generally distributed over the northern part of the State but does not yet occur in the commercial potato sections of southern Idaho. The first adults were observed on potatoes in the Moscow district on May 6.

POTATO APHID (Illinoia solanifolii Ashn.)

Virginia

G. E. Gould (May 22): The potato aphid is the commonest species found on truck crops at present. Owing to an unusually hot, dry period during May, winged individuals have migrated to many cultivated plants and to weeds. Serious infestations were noticed on seed spinach, eggplant, tomato, and potato, with an occasional record of damage to potatoes.

Florida

J. R. Watson (May 20): The potato aphid is still doing considerable damage to tomatoes in the south-central part of the State.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Kentucky

W. A. Price (May 21): The potato leafhopper is moderately abundant.

Minnesota

K. A. Kirkpatrick (May 9): The potato leafhopper is very abundant in Hennepin County.

TOMATO SUCKFLY (Dicyphus minimus Uhler)

Texas

S. W. Clark (May 12): This insect is generally abundant near Weslaco and severe damage is occurring in occasional cases.

A CURCULIO (Cohryastes ovipennis Sharp)

Texas

R. K. Fletcher (April 11): This curculio is reported to be very abundant at Garrison, seriously injuring stalks of tomato.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May): Large numbers of eggs were being laid in cabbage seed beds in Onondaga County by the last week in May.

Indiana J. J. Davis (May 22): The cabbage worm is damaging cabbage at Sheridan and Peru.

Minnesota K. A. Kirkpatrick (May 9): The imported cabbage worm is very abundant in Hennepin County.

Mississippi R. W. Harned and assistants (May): This insect is doing some damage in Jones and Jasper Counties, and is quite destructive at Lucedale.

DIAMOND-BACK MOTH (Plutella maculipennis Curtis)

Utah G. F. Knowlton (May 2): An adult was observed ovipositing on young cabbage sets at Farmington.

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

Connecticut R. B. Friend (May 24): There is an average abundance of cabbage maggots at New Haven.

Montana W. B. Mabee (May 20): Cabbage maggots are doing more damage than usual in Ravalli County.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Mississippi R. W. Harned and assistants (May): Reports of moderate abundance have been received from scattered localities in the State and of great abundance from Rosedale.

Alabama J. M. Robinson (May 24): The harlequin bug is very abundant at Auburn.

Texas F. L. Thomas (May 22): The harlequin bug is less abundant than usual at College Station, no complaints having been received this season.

CABBAGE APHID (Brevicoryne brassicae L.)

Virginia G. E. Gould (May 22): The cabbage aphid is unusually abundant on seed kale and may reduce the yield by 50 per cent. Only a few lice are found on the early cabbage crop.

Indiana J. J. Davis (May 22): The cabbage aphid was abundant and destructive to cabbage at Bourbon. May 18.

STRAWBERRY

STRAWBERRY LEAF ROLLER (Ancylis comotana Frohl.)

Indiana J. J. Davis (May 22): The strawberry leaf roller was reported as damaging strawberries at Mill Creek May 14.

OBLIQUE-BANDED STRAWBERRY LEAF ROLLER (Cacoecia obsoletana Walk.)

North Carolina W. A. Thomas (May 12): The work of this insect is much more in evidence this season than ever before observed in the Chadbourn district. It is not likely that any serious damage will occur.

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus L.)

Utah G. F. Knowlton (May 21): The strawberry root weevil is seriously damaging old strawberry patches at Logan. The plants have been going down very rapidly during the past week.

STRAWBERRY WEEVIL (Anthonomus signatus Say)

New Hampshire P. P. Lowry (May 28): The strawberry weevil was reported May 26 as doing considerable injury to a large field of strawberries at Ponemah.

New York Weekly News Letter, N. Y. State Coll. Agr. (May 19): There is evidence of the work of the strawberry weevil in Columbia County.

Maryland E. N. Cory and assistants (May 20): The strawberry weevil is injurious on strawberries and blackberries.

Virginia W. A. Thomas (May 31): A small area of cultivated blackberries was observed today which had more than 75 per cent of the entire crop destroyed by this insect. Strawberries in the same locality seem to be less seriously affected.

North Carolina W. A. Thomas (April 28): The strawberry weevil reached its peak of activity on dewberries at Willard this week. The outbreak has been unusually severe on the test farm at Chadbourn, destroying from 40 to 60 per cent of the entire crop. The injury appeared to be much greater where the plants were trained on wire trellis than where merely trained to stakes. There were more available buds on the trellised plants.

A BEETLE (Tyloderma morbillosa Lec.)

Washington Wm. W. Baker (May 17): This weevil is raising havoc in a number of strawberry fields, being particularly noticeable in new plantings close to old deserted fields at Grand Mound. One field examined had as high as 45 to 50 adults to a plant and the

feeding punctures and egg punctures had practically killed the plants outright in a week. For the first time concrete evidence of its breeding in wild strawberries in native sod was obtained.

A SCARABAID (Diplotaxis sp.)

Kansas

R. L. Parker (May 22): Diplotaxis sp. was reported attacking strawberries at Coffeyville. Reported as numerous.

STRAWBERRY ROOT WORM (Paria canella Fab.)

Virginia

W. A. Thomas (May 21): This insect seems to be widespread in the strawberry fields in the vicinity of Onley and is already leaving the foliage filled with irregular holes. Some of the growers reported that this insect caused the complete loss of a few acres of strawberries last season.

Indiana

J. J. Davis (May 22): Strawberry root worm was conspicuously injuring foliage at Tipton May 14.

A SESIID (Aegeria bibionipennis Boisd.)

Washington

Wm. W. Baker (May 5): Larvae of this moth were taken in wild strawberry crowns at Easton.

STRAWBERRY ROOT APHID (Aphis forbesi Weed)

North Carolina

W. A. Thomas (May 1): There seems to be an increasingly large number of these insects in crowns of young strawberry plants. Where the infestation is particularly heavy on the stems and foliage the plants are dying.

RED SPIDERS (Tetranychus spp.)

Mississippi

K. L. Cockerham (May 10): On two rows of English peas in a garden at Biloxi practically every plant showed heavy infestation. I do not recall as heavy infestation by red spiders on any crop during the past several years.

New York

Weekly News Letter, N. Y. State Coll. Agr. (May): In one field of strawberries in Suffolk County the red spider was causing serious damage. Luckily this field was under irrigation and the insects were easily controlled.

Maryland

E. N. Cory and assistants (May): The red spider is appearing on strawberries on the Eastern Shore.

Florida

J. R. Watson (May 20): The red spider is fairly abundant on strawberries, beans, and other plants.

SPITTLE BUGS (*Cercopidae*)

Washington

Wm. W. Baker (May 9): Two species of spittle bugs are rather thick this season, particularly at Winlock and Chehalis. Some dwarfing of the plants occurs and the fruit spurs are seriously injured; in severe cases practically no fruit develops on heavily infested spurs.

BEANS

MEXICAN BEAN BEETLE (*Epilachna corrupta* Muls.)

Delaware

L. A. Stearns (May 20): The first emergence of the Mexican bean beetle at Camden occurred May 6.

Virginia

P. J. Chapman (May 22): The first adult was found in a snap-bean field May 1 and several others were observed May 3 and 4. The dry weather however appeared to retard emergence and for practical purposes emergence did not start until after the rains of the middle of May. Young beans an inch or more long may now be found in the earliest plantings of snap beans and some picking may be done about June 1. According to our hibernation cages, many beetles survived the winter in this area. A cage located in a pine woods (*Pinus taeda*) shows a 36 per cent survival up to this date; and another cage in a mixed pine and oak woods also shows a 36 per cent survival. It appears likely that one or more of our cages may eventually show a 50 per cent survival. The first eggs were found on this date.

North Carolina

W. A. Thomas (May 2): Overwintering adults are attacking both string and lima beans and ovipositing rather heavily on the foliage at Chadbourn.

Georgia

C. H. Alden (May 21): The Mexican bean beetle is scarce at Cornelia; few old beetles out.

Kentucky

J. A. Price (May 21): The Mexican bean beetle is very abundant over the entire State.

Mississippi

Jack Milton (May 20): The Mexican bean beetle is scarce, but an adult beetle was found at Ripley.

Texas

F. L. Thomas (May 22): The Mexican bean beetle is moderately abundant in El Paso.

BEAN LEAF BEETLE (*Cerotoma trifurcata* Forst.)

Virginia

P. J. Chapman (May 22): Injury was severe in some small patches of snap beans, starting about May 5 and subsiding considerably at this date.

North Carolina W. A. Thomas (May 9): Beans and cowpeas at Chadbourn are suffering rather severely from attacks of the bean leaf beetle. Already the young plants have much of the foliage riddled by this insect.

South Carolina F. Sherman (May 19): The bean leaf beetle has been reported a number of times, usually with plenty of specimens to show its abundance.

Georgia S. C. Chandler (May 16): The bean leaf beetle did moderate to severe injury to green beans in the southern end of the State.

Mississippi R. W. Harned and assistants (May): Bean leaf beetles were reported as abundant on garden beans at Hattiesburg, Senatobia, and Collins during the last week in April. The correspondent at Collins wrote: "The beans in this garden were about four inches high. The leaves on the plants were eaten entirely up." This insect is doing some damage in the vicinities of Laurel, Corinth, Ocean Springs, and Yazoo City, and serious injury has been reported from Jonestown.

IMBRICATED SNOUT BEETLE (*Epicaerus imbricatus* Say)

Mississippi R. W. Harned (May 21): Specimens were received on April 22 from Hattiesburg, and on April 29 from Leakesville, where they were reported as fairly abundant on garden beans.

BEAN APHID (*Aphis rumicis* L.)

Virginia G. E. Gould (May 22): After being practically absent in the vicinity of Norfolk last year, the bean aphid has been found on beans and several weeds this spring.

PEAS

PEA APHID (*Illinoia pisi* Kalt.)

Maryland E. N. Cory and assistants (May 20): Pea aphids are worse on the Eastern Shore than for many years.

Virginia G. E. Gould (May 22): This insect has been observed on vetch, alfalfa, clovers, garden peas, and sweet peas at Norfolk. Individuals are not so numerous as last year.

CUCUMBERS

MELON APHID (Aphis gossypii Glov.)

Virginia

G. E. Gould (May 22): This aphid is appearing earlier than last year, having been found on squash, cantaloupe and cucumber. There have been no reports of serious infestation yet.

Florida

J. R. Watson (May 20): The melon aphid became quite abundant and widespread on watermelon the last days of April, but has been brought under control by hymenoptero^{us} parasites, so that very little injury is being done.

Mississippi

H. Dietrich (May 20): Melon aphids were very bad in a watermelon field at Vernal previous to May 13.

MELON WORM (Diaphania hyalinata L.)

Florida

J. R. Watson (May 20): The melon worm is proving troublesome in many parts of the State, particularly to summer squash and cantaloupe.

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Delaware

L. A. Stearns (May 20): First adults of the striped cucumber beetle were observed at Bridgeville May 9.

North Carolina

T. A. Thomas (May 5): A large number of growers at Chadbourn report great hordes of these insects appearing suddenly in their fields and in some cases almost destroying the crop over night.

Minnesota

K. A. Kirkpatrick (May 9): The striped cucumber beetle is very abundant in Hennepin County.

Mississippi

R. W. Harned and assistants (May): This insect is being reported as from moderately abundant to very abundant in practically all sections of the State.

Arkansas

D. Isely (May 23): The striped cucumber beetle is moderately abundant in the cantaloupe sections of the Arkansas River bottoms, and practically absent in the southwestern part of the State.

ONIONS

ONION MAGGOT (Hylemyia antiqua Meig.)

New York

Weekly News Letter, N. Y. State Coll. Agr. (May): The adults were emerging rapidly in Williamson County before the

cool weather of the week of May 19, which checked them somewhat. The first flies were observed in the field on May 15, which is earlier than last year. Flies were observed in large numbers in Oswego County May 22.

North Carolina W. A. Thomas (May 10): There is a very general infestation of this insect on onions in this section (Chadbourn). In many gardens the greater part of the epidermis is already eaten from the foliage.

Indiana H. K. Riley (May 20): Maggot flies began emerging in the laboratory. Maggot flies are observed daily in onion fields, in baited traps, and in bait pans. A small number of eggs were found at the E. Thwaitt farm; these were near a baited flytrap.

J. J. Davis (May 22): The onion maggot is reported as an important pest at Sheridan, Cromwell and Corunna.

CARROT

CARROT RUST FLY (Psila rosae Fab.)

New York Weekly News Letter, N. Y. State Coll. Agr. (May 19): Carrot rust flies are making an early appearance in Williamson County. Flies were present May 14 in a cage which was put up the day before, so it is quite possible that the first emergence was several days earlier.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Nevada G. G. Schweis (May 20): The beet leafhopper is reported as being present in limited numbers at Fallon.

Utah G. F. Knowlton (May 19): Beet leafhoppers are moderately abundant in northern Utah. A number succeeded in passing over the winter, and a new generation is coming on. A few nymphs in the second and third instar have been taken. Up to date only a few of the beet fields have been invaded at Magna, West Garland, Bothwell and Salt Lake. The cold, stormy weather has been holding back the insects as well as the beets. (May 24): Males of the beet leafhopper were collected west of Corinne, south of Lampo, at Kosno, and at Snowville.

SUGAR BEET FLEA BEETLE (Monoxia puncticollis Say)

Utah

G. F. Knowlton (May 3): Flea beetles are usually less abundant on sugar beets in Salt Lake and Utah Counties than in Box Elder and Weber Counties. (May 13): Black flea beetles are still doing some damage to sugar beets at Thatcher, Garland and Tremonton, but in most places they are less abundant than two weeks ago.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

North Carolina

C. H. Brannon (May 24): Injury which started in plant beds is rapidly spreading to tobacco in the field.

GARDEN SPRINGTAIL (Smithurus hortensis Fitch)

Massachusetts

A. I. Bourne (May 22): Tobacco growers in the Connecticut Valley are being troubled considerably this year by garden springtails which are working in the tobacco beds.

TOBACCO BUDWORM (Chloridea virescens Fab.)

Florida

F. S. Chamberlin (May 5): Tobacco budworms are unusually scarce for this season of the year in Gadsden County.

HORNWORMS (Protoparce spp.)

Florida

F. S. Chamberlin (May 22): Tobacco hornworms are very abundant at the present time.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Florida

W. E. Haley (May 12): A very low infestation of the sugarcane borer was found in the Everglades section of Florida, with the exception of a small area at Canal Point. Near Sarasota, however, the infestation was very heavy. At Fellsmere, Indian River County, no borers could be found.

Louisiana

T. E. Holloway and J. W. Ingram (May 22): A few corn plants containing larvae of the sugarcane borer were found today in a garden near Raceland. No borers were found in the general field plantings of corn. Today we found a number of young sugarcane plants killed by the borer near Houma. They contained larvae of various sizes and one pupa.

Louisiana

W. E. Hinds (May 30): The sugarcane borer is unusually scarce throughout the sugarcane section up to this time.

SUGARCANE BEETLE (Euetheola rugiceps Lec.)

Louisiana

T. E. Holloway and J. W. Ingram (April 25): The sugarcane beetle has appeared in fields of sugarcane in southern Louisiana, but the damage so far noted has been negligible.

W. E. Hinds (May 30): Sugarcane beetle is more abundant than usual and is damaging stands of corn and sugarcane in more localities and on a wider variety of soil types than heretofore. We are starting an intensive study of this beetle as a cane and corn pest in Louisiana.

RICE

RICE WATER WEEVIL (Lissorhoptrus simplex Say)

Louisiana

W. A. Douglas (May 24): The weevils are present in about the same numbers as in 1929. Very slight injury is noted to the leaves of young flooded rice, where water has recently been put on. No injury has been observed that is noticeable without close inspection.

SUGARCANE BEETLE (Euetheola rugiceps Lec.)

Louisiana

W. A. Douglas (May 24): Fields of young rice have been examined during the month, and the injury from the sugarcane beetle varies from slight to very heavy. In a few fields more than 50 per cent of the young stalks on the levees and high places in the fields have been chewed off. Injury is greater than in 1929.

F O R E S T A N D S H A D E - T R E E I N S E C T S

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Nebraska

M. H. Swenk (May 13): On April 22 a Pawnee County correspondent reported that the bagworm was destroying a fine windbreak of 35-year-old cedars on his place.

SATIN MOTH (Stilpnophila salicis L.)

Maine

H. B. Peirson (May 15): This promises to be a heavy insect year; the satin moth is very abundant in the vicinity of Augusta.

GIPSY MOTH (Porthetria dispar L.)

Maine

H. B. Peirson (May 15): A heavy infestation of the gipsy moth is expected this year.

SPRING CANKER WORMS (Paleacrita vernata Peck)

Minnesota

R. N. Chapman (May 26): The spring canker worm is abundant along the Mississippi River near Fort Snelling.

Kansas

H. B. Hungerford (May 29): Spring canker worms are defoliating elm trees in woodlands in Douglas County.

ASH

ASH SAWFLY (Tomostethus bardus Say)

Maryland

E. N. Cory (May 20): The ash sawfly occurred in large numbers in the vicinity of Riverdale, defoliating practically all the ash trees.

ASH LEAF BUG (Neoborus illitus Van D.)

California

E. O. Essig (May 17): This insect caused leaves of the infested trees to turn yellow.

BOXELDER

BOXELDER APHID (Periphyllus negundinis Thomas)

South Dakota

A. L. Ford and H. C. Severin (May 20): The boxelder aphid is more severe in eastern South Dakota than it has been for the past ten years.

Nebraska

M. H. Swenk (May 13): The boxelder aphid was abundant and injurious on boxelder during the first half of May.

ELM

A LEAF BEETLE (Calligrapha scalaris Lec.)

Nebraska

M. H. Swenk (May 13): On April 21 a correspondent reported that the elm trees along Elm Creek in Webster County were infested with thousands of leaf beetles which were eating the buds and young leaves as fast as they came out. Injury by this species occurred in June, 1929, in the same locality, and along the Republican River east to Nuckolls County and west to Furnas County.

ELM SCURFY SCALE (Chionaspis americana Johns.)

Nebraska

M. H. Swenk (May 13): An unusual number of complaints of infestations of white elms by the white elm scale have been received.

EUROPEAN ELM SCALE (Gossyparia spuria Modesar)

Ohio

E. W. Mendenhall (May 10): The elm shade trees in Sidney (Shelby County) are quite badly infested.

LARCH

LARCH CASE BEARER (Coleophora laricella Hbn.)

Maine

H. B. Peirson (May 19): The larch case bearer migrated to foliage in the vicinity of Augusta May 12. A very heavy outbreak is occurring. Twenty-five per cent of the trees are already completely defoliated. Repeated defoliations by this insect have killed considerable larch in this section of Maine. We have not succeeded in rearing any parasites.

MAPLE

MAPLE NEPTICULA (Nepticula sericopeza Zell.)

Connecticut

E. P. Felt (May 26): The moths are somewhat common on Norway maples in southern Fairfield County. It is possible that this insect may be somewhat injurious and cause a considerable dropping of foliage.

New York

E. P. Felt (May 26): The moths are somewhat common on Norway maples in portions of Westchester County.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Alabama

J. M. Robinson (May 24): The cottony maple scale has shown up in large numbers on maple leaves at Birmingham.

OAK

A LEAF ROLLER (Argyrotoxa semipurpurana Kearf)

Connecticut

E. P. Felt (May 26): Oak leaf rollers, mostly Argyrotoxa semipurpurana, are exceedingly abundant and injurious to oaks, especially red oaks, in southwestern Connecticut, half to three-fourths of the foliage being destroyed at the present time. This insect has been injurious for several years.

PINE

PINE BARK APHID (Chermes pinicorticis Fitch)

Ohio E. W. Mendenhall (May 14): An outbreak of the pine bark louse on pine trees is occurring at Willoughby and at Mentor.

Vermont H. L. Bailey (May 26): Many pine twig moth larvae were found in burrows in a Jack pine plantation at Lyndon; also in native Pinus rigida at Hartland and Scotch pine at Essex.

Connecticut R. B. Friend (May 24): Infestation of red pine around New Haven is apparently increasing.

New Jersey T. E. Snyder (May 31): This insect is injuring pines at the State Hospital at Bergen.

WHITE PINE WEEVIL (Pissodes strobi Peck)

Maine H. B. Peirson (May 15): The white pine weevil was active April 15.

Connecticut Neely Turner (May 20): Eggs at New Haven hatched from May 8 to 15, which is 10 days earlier than in 1929.

Minnesota A. G. Ruggles (May 26): The pine leaf scale is very abundant at Lake City, St. Paul and Minneapolis. Eggs began hatching at Lake City on May 6 and in the latter named locality on May 8 and were still hatching at both places on May 23.

NORTHERN MOLE CRICKET (Gryllotalpa hexadactyla Perty)

North Carolina F. H. Claridge (May 2): Specimens of two insects caught in the Nursery of the State Conservation and Development Department near Clayton, were determined by A. N. Caudell as Gryllotalpa hexadactyla Perty. The insects were not caught in the act of eating the seedlings, but small runways very much resembling a miniature mole path were found. The seedlings attacked are longleaf, shortleaf, slash, loblolly, and some red pine which were being used to experiment with. The seedling is usually pulled down into the ground and the stem eaten off. The greatest damage is noticed in seedlings ranging from a month to three months old.

SPRUCE

SPRUCE BUDWORM (Harmologa fumiferana Clem.)

Wyoming

Monthly Letter of Bur. Ent., U. S. D. A., No. 192 (April): The Deficiency Bill carried \$10,000 for experimental control of the spruce budworm in the Cody Canyon of the Shoshone National Forest. This is the east entrance to the Yellowstone National Park. A severe infestation of the spruce budworm has been progressing here for three or four years.

A LEAF MINER (Epinotia nanana Treitschke)

Maine

H. B. Peirson (May 5): This insect (Epinotia nanana) promises to do a great deal of damage.

Wisconsin

E. L. Chambers (April 25): The spruce needle miner is being reported more abundant than usual on spruce in southern Wisconsin. It is becoming more serious on our ornamental evergreens. (May 22): This insect is doing severe damage this year. Specimens are coming to this office every day.

Illinois

W. P. Flint (May 19): The spruce leaf miner has been sent in from several points in northern Illinois with the report that it is causing very serious injury.

SPRUCE GALL APHID (Chermes abietis L.)

New England,
New Jersey and
New York

E. P. Felt (May 26): This insect is generally present in the New Jersey, New York, and New England area and is somewhat local in habit, occasional trees or groups of trees being badly infested, while others, even those nearby, may be nearly free. The indications are that there will be at least a moderately good sized generation this season.

Ohio

E. W. Mendenhall (May 14): Some spruce gall aphids are present in blocks of spruce at Painesville, Lake County.

I N S E C T S A F F E C T I N G G R E E N H O U S E A N D
O R N A M E N T A L P L A N T S A N D L A W N S

APHIDS (Aphiidae)

Georgia O. I. Snapp (May 20): Aphids are apparently more abundant here this year than usual. They are damaging plantings around homes.

Missouri L. Haseman (May 27): Snowballs, common spirea, as well as shade and fruit trees, have developed unusually heavy infestations of plant lice through central Missouri.

Nebraska M. H. Swenk (May 13): Snowball aphids (Aphis viburnicola Gill) were abundant and injurious on snowball during the first half of May.

Utah G. F. Knowlton (May 19): Two species of aphids are damaging snowball bushes in most parts of northern Utah.

A SPANWORM (Melanchroia chephise Cram.)

Florida J. R. Watson (May 20): Heavy infestations of caterpillars occurred in Polk County on the ornamental plant Phyllanthus. Large hedges of this plant were practically defoliated.

GREENHOUSE WHITEFLY (Trialeurodes vaporariorum Westw.)

Ohio E. W. Mendenhall (April 30): Pelargonium, salvia, ageratum, lantana, heliotrope, fuchsia, hibiscus, and geranium are badly infested with the greenhouse whitefly in some of the greenhouses in Springfield, Clark County.

FUNGUS GNATS (Mycetophilidae)

North Dakota J. A. Munro (May 21): Specimens of fungus gnat larvae (species undetermined) were received from Judson, Morton County, on May 16. They were reported as being abundant in hotbeds and responsible for stunting the development of young plants.

ARBORVITAE

ARBORVITAE LEAF MINER (Argyresthia thuiella Pack.)

Connecticut M. P. Zappe (May 12): This insect is causing considerable injury on ornamental plantings of arborvitae.

AN APHID (Dilachnus sp.)

Mississippi H. Gladney (May 15): An aphid (Dilachnus sp.) is very abundant on arborvitae at Ocean Springs.

D. W. Grimes (May 19): Dilachnus sp. is very abundant in Holmes, Attala, and Leake Counties.

EUROPEAN FRUIT LECANIUM (Eulecanium corni Bouche)

Ohio

E. W. Mendenhall (May 26): The European fruit lecanium is quite bad on arborvitae in a nursery at Cincinnati.

BOXWOOD

BOXWOOD LEAF MINER (Monarthropalpus buxi Labou)

Delaware

L. A. Stearns (May 20): First emergence of the boxwood leaf miner at Wilmington occurred May 10.

CANNA

CANNA LEAF ROLLERS (Calpodes ethlius Cram.)
(Geshna cannalis Quaint.)

Mississippi

R. W. Harned (May 21): The canna leaf rollers are beginning to make their appearance at various places. Complaints accompanied by specimens have ^{been} received from different parts of the State.

Texas

F. L. Thomas (May 20): Worms of all sizes of the larger canna leaf roller are rather abundant on cannas. This insect has appeared the last several years about this time.

IRIS

IRIS BORER (Macronoctua onusta Grote)

Ohio

E. W. Mendenhall (May 26): The iris borer is bad in many plantings in the State, where plants have been long standing.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Maryland

J. A. Hyslop (May 28): At Avenel these beetles are seriously disfiguring the very late varieties of iris by feeding on the petals. They spend the night beneath the falls and in the throat of the blossom.

A MOTH (Cnephacia longana Haw.)

Oregon

Wm. W. Baker (May 12): This pest was present in Portland in fair numbers in the buds of two kinds of iris, riddling the buds with fine holes.

POTATO APHID (Illinoia solanifolii Ashm.)

Washington, D.C. J. B. Parker (May 1): Aphids which are damaging iris plants at Brookland, D. C., have been determined by P. W. Mason as Illinoia solanifolii.

NARCISSUS

BULB MITE (Rhizoglyphus hyacinthi Boisd.)

Ohio E. W. Mendenhall (May 3): Many narcissus bulbs in plantings at Dayton are affected by bulb mites, which are probably a secondary cause of narcissus troubles.

OLEANDER

OLEANDER APHID (Aphis nerii Fonsc.)

Mississippi G. L. Bond (May 18): Aphids are very abundant on oleander around the City Hall at Laurel.

PRIVET

A MITE (Phyllocoptes sp.)

Maryland E. N. Cory and assistants (May 20): A Phyllocoptes mite is reported quite generally on privet.

ROSE

OBLIQUE-BANDED LEAF ROLLER (Cacoecia rosaceana Harr.)

Ohio E. W. Mendenhall (May 14): Found the rose leaf tyer quite numerous in a rose plantation at Willoughby, Lake County.

BRISTLY ROSE SLUG (Cladus isomerus Nort.)

Ohio E. W. Mendenhall (May 15): I find the bristly rose slug bad again in Columbus. It seems to be especially bad on the climbers and soon destroys the leaves.

SPIRAEA

SPIRAEA APHID (Aphis spiraecola Patch)

Indiana J. J. Davis (May 22): Spiraea aphids were reported abundant at Clayton May 12.

Nebraska M. H. Swenk (May 13): The spiraea aphid was abundant and injurious on spiraea during the first half of May.

Kansas R. L. Parker (May 22): Spiraea aphids were reported on spiraea from Chanute.

Mississippi G. I. Worthington (May 14): Spiraea in Coahoma, Bolivar, Sunflower, and Washington Counties is generally infested by aphids, but the damage is of minor importance.

YEW

A MEALYBUG (Pseudococcus sp.)

Connecticut W. E. Britton (May 20): This insect is very abundant on Taxus from Japan. Specimens were first identified in 1924 as P. kraunhiae, but Prof. Ferris has pointed out that kraunhiae is very different.

I N S E C T S A F T A C K I N G M A N A N D
D O M E S T I C A N I M A L S

MAN

CLOVER MITE (Bryobia praetiosa Koch)

Connecticut W. E. Britton (May 21): Clover mites are crawling over the side of a house in New Haven and a school in New Britain; also found inside.

New Jersey R. B. Lott (May 6): Mites were very abundant on an estate at Princeton, where they entered the house and caused much annoyance over a period of six weeks.

Nebraska M. H. Swenk (May 13): At Lincoln several housekeepers complained of an abundance of the clover mite in the house during the last week in April and the first week in May.

Kansas R. L. Parker (May 22): The clover mite is reported on wheat near Wichita.

Utah G. F. Knowlton (May 9): The brown mite is damaging potatoes in the experimental greenhouse at Logan.

FLEAS (*Siphonaptera*)

Missouri

L. Haseman (May 27): Numerous complaints have been received during the month regarding serious epidemics of fleas, particularly on hog farms.

CHIGGER (*Trombicula irritans* Riley)

Mississippi

H. Dietrich (May 20): Chiggers are very abundant everywhere in southern Mississippi.

HORSE

HORSE FLIES (Tabanidae)

Mississippi

H. Dietrich (May 20): Horse flies (several species) are very abundant in George, Stone, and Jackson Counties, causing much annoyance to cattle and mules.

SHEEP

SHEEP TICK (*Melophagus ovinus* L.)

Missouri

L. Haseman (May 27): Sheep ticks are worse than they have been in six years in north-central Missouri.

H O U S E H O L D A N D S T O R E D -

P R O D U C T S I N S E C T S

TERMITES (*Reticulitermes* spp.)

Maryland

E. N. Cory and assistants (May 20): Termites seem to be on the increase in Baltimore.

South Carolina

F. Sherman (May 19): Several inquiries and complaints have been received this spring of termites in woodwork of residences.

Illinois

W. P. Flint (May 19): Many reports of termite damage have been received.

Kansas

R. L. Parker (May 22): Termites were reported in Manhattan in six houses and in tomato plants from April 20 to May 20. They are also reported from Leonardville, Wamego, Medicine Lodge, Wichita, Eureka, and Oberlin in houses and farm buildings, and in Wichita in a storage building of a flour mill.

OLD HOUSE BORER (Hylotrupes bajulus L.)

North Carolina

Z. P. Metcalf (May 12): It is reported that one of the powder-post beetles practically completely destroyed the timbers of a barn 40 by 60 feet.

Ohio

T. H. Parks (May 21): Complaints of damage by ants to lawn grass have been received regularly during the month. We have had very dry weather during the past eight weeks, which may be responsible.

Michigan

R. H. Pettit (May 16): Ants are very plentiful in lawns and in dwellings this year.

Nebraska

M. H. Swenk (May 13): Complaints of injury in lawns and gardens, and annoyance in houses by ants, have continued to come in abundantly during the period here covered. As during the early part of April, these have mostly related to Formica fusca L. doing injury out of doors. Ants reported as annoying in houses included the little red ant (Monomorium pharaonis L.), the common large carpenter ant (Camponotus herculeanus pennsylvanicus DeG.), and one case each of the field ant (Lasius niger neoniger Emery) and Prenolepis imparis Say, the two last mentioned species from Holt County and Colfax County, respectively.

Kansas
and
Missouri

R. L. Parker (May 22): Ants were reported on peony at Kansas City. Carpenter ants were reported in a house at Manhattan and in lawns and strawberry beds in Kansas City, Kans. and Mo. Red ants were reported in lawns and a basement at Kansas City, Mo.

Mississippi

N. L. Douglas (May 15): Quite a few of the native ants, such as the honey ant, fire ant, tiny black ant, etc., are showing up now in Yalobusha, Grenada, and Montgomery Counties.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

Maryland

E. N. Cory (May 27): The Argentine ant was found in the Clifton Park greenhouses on February 6, and subsequently in the Carroll Park and Druid Hill Park greenhouses in Baltimore, but not in any commercial greenhouse establishment. (Identification by M. R. Smith.)

Mississippi

N. D. Peets (May 21): The poisoning campaign against the Argentine ant conducted in March, 1930, seems, so far, to be giving excellent results. Numbers have reported as not being bothered with ants, while no one has reported any complaint in Copiah, Simpson, Lincoln, Lawrence, and Jefferson Davis Counties.

J. P. Kislanko (May 5): Many winged males of the Argentine ant were noticed in one colony at Bond on May 5.

W. L. Gray (May 17): The Argentine ant is very abundant in the vicinity of Natchez.

A WASP (Polistes pallipes L.)

Nebraska

M. H. Swenk (May 13): A Sherman County correspondent reported that this social wasp built its nests in great abundance in his barn and about his house and that the insects were a great nuisance, buzzing around like flies and occasionally stinging if disturbed.

A LONG HORN BEETLE (Cerambycidae)

Indiana

J. J. Davis (May 22): A cerambycid larva was received from Wheatland, May 9, with the information that it had issued from a 1-inch wooden bottom of a chair which had been in possession of the correspondent for 33 years. The wood of the chair bottom was supposed to be mahogany, but perhaps was only a hardwood with mahogany finish.

MITES (Tyroglyphidae)

Massachusetts

J. V. Schaffner, Jr. (May 12): A Massachusetts corporation (manufacturers of felt products) sent in samples of their product that is used for visors of caps. They had noticed that some of the material was streaked and spotted, and had their chemist make an investigation. He found numerous small creatures crawling on the samples examined. It developed that, as this material is cut in large sheets and stacked in piles, perhaps 5 feet high, before it is entirely dry, it made conditions suitable for mites to breed. On arrival here the samples were dry and all specimens were dead.

A MITE (Haemogamasus sp.)

New York

W. Moore (May 12): A pest which is causing us trouble is a mite which Dr. Ewing determined as a species of Haemogamasus. This mite originally came to us in a bag of rabbit fur infested with clothes moths. We again observed it in a rug, infested with clothes moths, obtained in Yonkers, the same rug previously mentioned containing parasitized clothes moths. I have no positive proof as yet, but feel very confident that this mite is attacking the eggs and larvae of the webbing clothes moth*. This is rather interesting, as the species of this genus are considered parasites of moles and field mice.

* Tineola biselliella Hum.

